THE MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—12TH YEAR. SYDNEY: SATURDAY, SEPTEMBER 5, 1925. No. 10.

Table of Contents

[The Whole of the Literary Matter in THE MEDICAL JOURNAL OF AUSTRALIA is Copyright.]

	PAGE.
ORIGINAL ARTICLES—	
"Common Sense," by EUSTACE RUSSELL, M.B., Ch.B.	273
"Splenectomy in Acute Essential Thrombocytopenic (Hæmorrhagic) Purpura," by S. O. COWEN, M.D.	279
"Talipes Calcaneus," by W. KENT HUGHES, M.B., M.R.C.S.	283
REPORTS OF CASES—	
"A Case of Cystitis Cystica Associated with Severe Hæmaturia," by W. A. HAILES, F.R.C.S, and F. M. BURNET, M.D.	285
REVIEWS—	
Bronchoscopy and Œsophagoscopy	287
ANALYTICAL DEPARTMENT—	
"Milk Emulsion"	288
LEADING ARTICLES—	
The Venereal Diseases Campaign	289
CURRENT COMMENT—	
The Origin of Cancer	290
ABSTRACTS FROM CURRENT MEDICAL LITERATURE—	
Bacteriology and Immunology	292
Hygiene	293
BRITISH MEDICAL ASSOCIATION NEWS—	PAGE.
Scientific	294
Nominations and Elections	298
THE AUSTRALASIAN MEDICAL PUBLISHING COMPANY, LIMITED—	
Annual Meeting	298
CORRESPONDENCE—	
Chronic Abscesses	299
PROCEEDINGS OF THE AUSTRALIAN MEDICAL BOARDS—	
Victoria	299
OBITUARY—	
Leslie Best	299
MEDICAL PRIZES—	
Prize Essay on Maternal and Infantile Mortality and Morbidity	299
BIRTHS, MARRIAGES AND DEATHS	300
BOOKS RECEIVED	300
MEDICAL APPOINTMENTS	300
MEDICAL APPOINTMENTS VACANT, ETC.	300
MEDICAL APPOINTMENTS: IMPORTANT NOTICE	300
DIARY FOR THE MONTH	300
EDITORIAL NOTICES	300

COMMON SENSE.[1]

By EUSTACE RUSSELL, M.B., Ch.B. (Edinburgh),
Honorary Physician, Brisbane Hospital, Brisbane.

I HAVE often noticed that the authors of papers contributed to scientific journals preface their works with a sort of apologia for having had the presumption to put their views before the readers and that they do their allotted task "with the greatest diffidence" and so forth.

There is no such apology to make in this case, simply because the title of the paper I am about to read was chosen for me; any guilt must rest with the instigator and the apology, if any, must come from him.

It has often been said that the first thing which a medical practitioner has to learn, is to unlearn all that he was taught in the medical school where he learnt the practice of his profession. I take it that this idea has arisen from the fact that in the actual practice of our profession one of the fundamental reasons for so doing is to earn an honest living.

It is I suppose true to a small extent that a great deal of the subject matter taught at a University is more or less futile and unnecessary, but there still remains this that all the various subjects taught are part and parcel of the scheme for imparting knowledge to the learner; I have not a better one to suggest at the moment. There is a trite saying that "you can lead a horse to water but you cannot make him drink" and this was parodied by *Punch* many years ago into :"You can lead a man to the Bar but you cannot make him think." This latter is equally applicable to the members of our profession who, being invested with a degree and a whole fund of academic knowledge, are quite incapable of thinking for themselves.

Teaching to think is a very important and necessary part of our education and a great many of us spend a good deal of our life after graduation in trying to teach ourselves to think clearly and concisely about the various subjects in which we are interested whether medical or outside the profession.

There have been many exponents of the art of teaching to think and perhaps an outstanding example of these was Socrates who in spite of his handicap gathered round him a school of followers in whom he implanted his allegedly revolutionary philosophy and who are famous today as Socrates himself is.

[1] Read at a meeting of the Queensland Branch of the British Medical Association on July 3, 1925.

We as medical men are apt to remember Socrates merely on account of his fatal adventure with the hemlock and perhaps of a few of his famous discourses whilst he was incarcerated, but I think that he is much more to be remembered because he taught the youth of Athens to think for themselves. And this from a man without a university degree without the impedimenta of a teaching school and without the assistance of the academic heads and indeed in the face of their fiercest opposition; he taught his new philosophy and it has stood the test of hundreds of years.

How much more should we expect of ourselves and our like with all the advantages of systematic training and education!

There has been within our own profession from time to time a number of outstanding men whose mode of thought and teaching made a widespread appeal. Within the memory of the youngest of us and not likely to be forgotten by any of us there are two names amongst the world's teachers of medicine and its science and art which stand out in recent years in prominent relief. These names are Mackenzie and Osler.

I take it there is no medical man in this room who has not read Mackenzie's "Diseases of the Heart" and I trust there are few who have not improved their knowledge and widened their horizon by studying his masterly book, "Symptoms and their Interpretation," because there is in both these books a fund of sound learning which stamps the work of the man whose knowledge is the result of years of diligence and honest endeavour, apart altogether from the professional attainments of the very highest order which he possessed. It is emphasized in all his writing that it is within the province of every practitioner to be a student of research, as he himself was. These books are valuable on account of the altogether delightful human touch which pervades all his teaching and almost his every act during his long and inestimably useful life. In fact it may be said that his name will live for many years as the *beau idéal* of the medical practitioner.

And who of us is there who did not delight in the reading of his "Osler" and how many are there amongst us who did not try to commit to memory whole pages of that eminently readable and masterly book? Who amongst us has not blessed Osler for showing us the way for a better and easier understanding of the practice of physic as we know it? There is no name amongst us more of a household word than that of Osler and to no man's memory do we pay a greater homage as a teacher and as a physician. Let those who would wish to know the high ideals of their profession and to develope the best of their faculties, turn their attention to his essays for their serious perusal and digestion. These names, Mackenzie and Osler, are the names of men who were truly great amongst us and their works are lasting evidence of their greatness; one of their attributes was the possession of a wonderful fund of common sense.

Common sense has been defined as the complement of those cognitions or convictions which we receive from Nature, which all men possess in common and by which they test the truth of knowledge and the morality of actions. It has also been described as native practical intelligence, mother wit, natural prudence, tact in behaviour, acuteness in the observation in character, in contrast to habits of acquired learning or speculation. My definition and it will serve its purpose for tonight, is that common sense is an inherent quality possessed by all to a greater or lesser degree which enables us to see the obvious and to make sane deductions from what we see and inspires us to prompt and rational action.

It will be seen from the above definitions that there is a very wide field to cover under the heading of these two small words, but as I intend to confine myself to a very limited part only of the application of the term in regard to the practice of medicine, it will not take a very long time to tell.

In a profession such as ours, which depends to a considerable extent on a not very exact science—indeed it is often enough as we all know a very inexact science—there is a tendency to make everything in connexion with the profession and its adnexa so to speak as difficult and as involved as it is possible within the realms of human understanding and not infrequently outside them. Whereas the highest aim to which we can all attain is the reduction of all our dealings in the profession to the simplest possible formulæ, whether it be in our questions to the patient or our notes or our interpretation of the signs and symptoms noted; this tendency accounts no doubt for the invariable skill of the young physician in overlooking the obvious and alighting on some obscure and rare disease to the intense delight of their *amour propre* and to the horror of his less imaginative mentor.

At the risk of seeming tedious and superfluous I intend to indicate the obvious steps in interviewing the patient, the taking down of the history, the classification of symptoms and the examination of the patient. It takes all sorts of people to make a world and it similarly takes a great variety of people to make a profession such as ours. It is therefore natural that there should be a considerable difference in the manner and method of approach of the doctor to the patient. There is, of course, that curious culture known as the "bedside manner" and some of our number go to infinite pains to develope or acquire it in a high degree. There is not the slightest doubt that it goes a very long way in impressing the impressionable type of patient. I take it there is no profession which takes so much trouble to impress the patient with its wealth of wisdom as ours. It is, however, surely quite unnecessary to go to the lengths seen practised by some of our number.

There is, it goes without saying, a very definite charm about a manner that is easy and engaging, as there is in a voice that is pleasing and such a manner is a valuable asset to the possessor whether it be natural or acquired, but I am perfectly certain

that all the obsequious hand washing in invisible soap and the rest of it could be done away with without loss and there is on the other hand no excuse for a harsh or brutal attitude toward the patient, whether he be rich or poor. It would appear that there is some necessity for the teaching of the proper demeanour toward the patient and it would do a great deal of good to have medical students and resident medical officers taught to be pleasant and courteous to their patients, to be natural and without unnecessary gesture or gyrations.

There is too in practice just as important as the correct treatment of the patient, the correct attitude toward the fellow practitioner and the avoidance of that nasty feeling peculiar to contending physicians, the *odium medicum*. It is wise to be tolerant of our patients; it is more wise to be tolerant of our fellow practitioners and the better the feeling that prevails among the toilers in the profession, the better for themselves, the better for the patient and the fewer of the latter driven from the skilled aid of the regular practitioner to the vicarious and unscrupulous care of the quack.

It is the easiest thing in the world to give the other man a poke in the eye with a burnt stick, so to speak. I find myself hard pushed at times to give my colleagues the benefit of the doubt, but one thing is certain that if we could at all times realize how very dependent we are on one another and that selfishness and trickery spoil any game in life, we would by playing the game as it should be played, go through the world more happily and more easily and with our reputation as a profession still further enhanced.

There is a right and a wrong way of doing all things and at the outset it is wise to learn the great necessity for method. A proper system should always be adopted for taking notes and incidentally for making notes of the daily round and, this is equally important, a proper book-keeping system for the regulation of the financial side of the practice.

In taking notes of cases then a well defined plan should be in mind and this plan should be adhered to, so that in time it will come quite easily to the examiner how and where to begin and the history elicited from the patient and the notes made from the objective examination will be rapidly and intelligently reviewed and proper deductions made. I have made it a habit in my work to follow a very simple plan. Having obtained the necessary data as to the patient's age, occupation and so on, I ask one simple question: "What do you complain of?" In answer I usually get a brief *résumé* of the main symptoms. Often enough a diagnosis is given and not seldom the patient will say that he has come for the express purpose of having his complaint diagnosed.

The next question is: "How long have you had it?" In most cases the patient is able to give a tolerably accurate statement of the duration of the illness. I then proceed with the history of the present illness and in this it is of the greatest importance to allow the patient to describe the symptoms in his own words.

It cannot be impressed too deeply on the minds of the younger practitioners and students the value of the illumination of the story in the patient's own words, however quaint the phraseology or however ignorant he may appear to be; particularly is this so in the case of children who if they are allowed to proceed with their own description of their troubles, often give a better and more understandable account of the inner workings of the disease from which they are suffering than all the voluble meanderings which their elders can bring forth. Indeed, it contains more sense too in a great many cases than is derived from the answers to the most cunning questions their medical advisors can devise.

Having been given a more or less logical account of the alleged cause of the affliction, the course which it follows must be noted precisely and the definite order, mode and time of the development of any changes in that course and the effect of any treatment on the ailment which the patient may have had.

It is of the greatest moment to appreciate the influence of injury however slight, obviously of paramount necessity in the cases of injuries to the bones or joints or in the case of wounds, but not so obviously valid in the case of diseases where the influence of trauma is either not known or else is not appreciated, as for example in the case of tumours affecting the breast in which case the blow which attracts the patient's attention to the abnormality is looked upon as the actual exciting cause of the trouble.

In order to avoid falling into error as to possible cause and effect it is imperative to make as accurate a note as possible of the events and their relation to the time, say of an injury and the appearance of signs or symptoms of disease. It is equally of importance to note the time of the patient's exposure to infection, venereal or other, the time of undue exposure to heat or cold, the partaking of some particular kind of food or the administration of some unusual medicine or drug. The relative intensity of the pain or other symptom is often of the greatest value and the history of a constitutional change may point to the cause or effect of a local diseased state.

Put yourself in the patient's position and realize if you can the possible origin of the symptoms of which the patient complains. It is often quite easy to explain the origin of a given symptom if the trouble is only taken to be in sympathy with the patient. From this it is not a very far cry to a possible interpretation of the symptoms and a visualization of the pathology of the disease from which the patient suffers.

The present illness is then discussed *in extenso*. It is well to attempt to get the patient to give as briefly as is possible the mode of onset, the course and any treatment he may have had, withal having

in mind the idea of getting as nearly as possible to some definite anatomical relationship with the symptoms complained of. It is necessary to ask quite a number of questions of the patient, but these should be limited to matters of real importance without curtailing the data too much. A good deal of discretion has to be exercised in asking questions relating to sexual and other functions, unless they are really valid and have an important bearing on the case. It is quite obvious that the patient of average intelligence will not seldom withhold a matter to him of extreme delicacy from a person to whom he is a stranger. As a rule these details will be forthcoming to the examiner who is in sympathy with the patient and has the patience to wait and the discretion to keep a cautious rein on his tongue.

Each examiner should have in his mind's eye a categorical list of questions which he deems necessary to ask of the average patient; by the judicious use of these questions pertaining to symptoms he will usually bring forth practically all the data he is looking for. For example in the case of a patient suffering from early heart failure, how easy it is to overlook the first symptom of failure of response to effort. It may be that the patient merely complains of a vague discomfort in the heart region after effort, varying in degree or a further stage of a feeling of palpitation or when more developed actual breathlessness or again the severe pain of *angina pectoris*.

The various actions associated with the production of these symptoms are of the greatest importance as indicative in many cases of the severity of the affliction. In the case of *angina pectoris* the description of the pain, its site and radiation are often diagnostic. It is as well to include in the general questioning a brief review of the various systems not under suspicion, so that a possible important point in another region is not overlooked.

Always be prepared to listen to the other side of the story, no matter how stupid or futile it may appear to you; give credit to the patient for having used his intelligence in his description as you mark him as of a high order of intelligence for choosing you as his physician. The order in which the symptoms make their appearance is often of the greatest value and it is always safe to inquire as to the time and place and association of the appearance of the symptoms.

The next step is to place on record the previous illnesses of the patient, the date and the place at which the illness took place. The place of birth may be of some importance and I always note it. The family history is the next item and invariably is noted the age if living of the parents or if dead from what they died, the number of brothers and sisters living and dead, their health and the causes of death, the health of the wife or husband and the cause of death if not alive.

The next history to elicit is the personal one and this is often of the greatest importance.

I have already remarked the necessity of noting the occupation of the patient. In addition there has to be inquired into the matter of habits, say smoking and drinking. These should never be overlooked as they give quite frequently the clue to the situation.

It may be remarked here that I think too little attention is paid to the possible evils of smoking I find a number of my colleagues who are of the opinion that smoker's heart is a sort of myth, but I am convinced that a good many cases of alleged heart disease, alleged functional nervous disease and not a few real gastric disturbances can be traced to an over-indulgence in tobacco.

It is often asked to what extent tobacco and alcohol are harmful and it is difficult enough at times to give an opinion as to their harm or otherwise to a given individual. Suffice it that they do very little good anyway, indeed tobacco can be said never to do any good; the advice to curtail their use is generally good sound advice.

The mental side of the patient and his educational attainments are of great importance in given cases. One does not need to be a specialist in psychotherapeutics to realize the immense value of appreciating the mentality of the person with whom we are dealing.

The next point to consider is the actual physical examination of the patient. Here it is just as well to have a good idea of the method which is best to follow. Let it be emphasized that every examination should be as complete and as searching and as careful as it is possible for it to be and that no detail should be omitted on account of its seeming irrelevance and no point glossed over because we think that it has no immediate bearing on the case. It has always to be remembered that there is the human equation to be considered and that the people with whom we are dealing, are very real and their troubles to them are very real whatever they may appear to the doctor and that it is the human being who is wishful to be treated and not the disease. It is the disorder of the human subject which is to be studied and not by any means the thing which presents itself as a local injury or infection or even as a more wide result of some constitutional change. All the data which are gathered in the process of a physical examination, are for the most part for use in the diagnosis of the case and are therefore mostly what might be termed expert evidence, that is to say it is objective in character and has to be carefully weighed in order that proper use is made of it in the formation of a correct conclusion in association with the data already elicited.

It has already been emphasized how necessary it is to make a complete examination; further let it be emphasized that the examination should be conducted with a definite object in view, in a regular and useful order, each part of the examination of each system conducted in a sequence with which the examiner is familiar, so that there is a familiarity with the procedure which saves time and makes it easier and provides a closer cooperation of the examiner's senses in the consummation of a regular and of course simple plan.

It is almost unnecessary to refer to the need for accuracy in making the examination and neither should it be forgotten that it is inadvisable to take any man's word for granted, no matter how skilful he may be, no matter how great a regard we have for his opinion. Nothing in the examination should be assumed, the whole matter should be gone into. Nothing is less easy to forgive than the sin of omission in the proper examination of the patient.

It is, of course, of the greatest practical importance to make a note of what is found at the examination and to write it down at the time of the examination, even if the notes are of the briefest possible kind. If this very important point is neglected in the case of the average patient in practice, it should never be forgotten in cases in which there may be a necessity for review or in which there is a possibility of any medico-legal complication. It does not follow that there should be a stenographer at the elbow, but case-taking can be made very brief and very simple for the average man. I have to confess that I do not think my own notes would shed a great deal of light to anyone except myself, partly on account of their brevity, but as much on account of their illegibility. Of the various systems I prefer the case book, with proper pages for each patient and a proper index, but there is a good deal to be said in favour of the card system on account of the smaller amount of room required and partly because the case-taking and the financial side can be dealt with in the one system and on the one card.

The first essential in making an examination is to have the patient properly disrobed in a good light. It cannot be too strongly insisted that if these two points were observed, very many fewer mistakes would be made and very much better work would be done. How many of us have missed the importance of a lump in the groin which has caused the vomiting or the lump in the breast which called out for early removal, or the spinal curvature which explained the pain, almost always because we refused to recognize that there is one great fundamental principle in the practice of medicine and that is the complete examination of the patient.

There is no need to press the extensive examination of the patient who is excessively nervous or shy; as a rule they will submit to a closer inspection on better acquaintance and that better examination should at all times be insisted upon. At the same time if there is any doubt as to the wisdom of temporizing with a patient, there is only one course to pursue and that is to refer him to a colleague. There is a great danger in not doing the job properly and there is everything to gain and nothing to lose by a calm insistence on the rational procedure in investigation. Leave it to the quack and the charlatan to make his diagnoses by the magic touch; it may seem to pay and the large and enlightened public may flock to people of this class for a time, but there is nothing that pays better in the long run than honest toil conscientiously performed and there is nothing more conducive to mental comfort and physical well-being than the asset of an easy conscience.

In making the physical examination and noting the results observed it is well to have the procedure tabulated under three headings: (i.) General, (ii.) regional, (iii.) laboratory. Thus in the general examination as matter of routine the height, weight, complexion, nutrition and so on are noted, the presence of skin eruptions, dropsy, tumours, striæ, pigmentations and the rest, the pulse is counted and the respiration and the blood pressure. taken. It is surprising how few men take the trouble to take the blood pressure excepting the systolic and not too often that, but the diastolic pressure which is quite often the clue to the situation, is seldom noted.

Regional examination can be divided into five separate headings. This is done merely for the convenience of the examiner, not because there is any greater importance attached to any of them, but simply in order to get a routine method for gleaning the essential facts of the case and in marshalling these facts as a whole for the purpose of analysis in making a diagnosis and neglecting no part in tabulating them. The separate headings are: (i.) Head and neck, (ii.) thorax, (iii.) abdomen including pelvic examination, (iv.) limbs, (v.) nervous system. As an entirely separate entity the laboratory investigations and findings should be added.

Under the first heading, that is the one which includes the head and neck, there are several important points to which attention should be paid. Firstly the general outline of the face and the expression, the shape and outline of the skull, irregularities, depressions and so forth. The eyes, ears, mouth and throat are examined in turn and the neck is felt for lymphatic glands, enlargement of the thyreoid gland, tugging of the trachea, tumours or deformities of the cervical spine.

In the thorax its shape and the movements of the chest wall are noted, the breasts are examined and the axillæ are palpated for enlarged glands.

A routine examination of the lungs is always carried out, care being taken to auscultate thoroughly the bases of the lungs as well as the apices, as in no examination is a perfunctory effort more fatal than is that in the case of the examination of the lungs.

The heart is carefully mapped out and palpated and percussed so that no significant sign is overlooked.

The examination of the abdomen consists in a proper investigation of abdominal organs by inspection, percussion and palpation of the viscera, the utmost gentleness being used in the cases of injury when there is a suspected visceral lesion lest there be dire results from too rough handling.

The examination of the rectum oftentimes affords the clue to a diagnosis and thorough pelvic examination under an anæsthetic may be necessary in given cases.

The examination of the nervous system is really a very formidable process if carried out thoroughly. For all practical purposes it is merely necessary to make a note of the special senses, the motor functions and the reflexes, particularly of the pupil, and the deep reflexes. The mental state of the patient has been noted probably in the general taking down of the case history and unless of particular importance it will require only a passing note.

The laboratory tests are regarded as of paramount importance; I include under this heading also radiography.

It is surprising how many men gloss over the laboratory tests as being a work of supererogation, but the older I grow, the more stress I lay on the close cooperation of the physician with the laboratory worker; no case can be regarded as complete until all the data are garnered which have a bearing on the diagnosis and often enough the whole crux of a diagnostic question is decided by a simple laboratory finding.

I do not wish it to be inferred from that remark that laboratory tests can replace clinical data. They never can, but they are a very formidable ally in the proper application of those data.

It is quite impossible for the general practitioner or for that matter anyone else adequately to perform the whole of the laboratory tests in connexion with his work and it is very much more satisfactory both for the patient and the practitioner to have the work done efficiently and expeditiously by one whose special task it is.

No reasonable patient expects his medical man to be a specialist in every department of his profession. Of those who profess to be supermen, very few survive the test of time nor does it take long for it to be known that the work is either badly done or not done at all. It should be impressed, too, that the reason for calling the assistance of the laboratory worker is to obtain reports on the matter submitted and it is no part of the bacteriologist or other to make the diagnosis. It may be, of course, that his opinion is of inestimable value in forming an opinion, but it is the practitioner's job to make the diagnosis on the data accumulated.

I need not emphasize the value of the examination of blood smears, urine examinations, renal function tests and the absolute necessity for the proper routine of carrying out the estimation of the blood sugar content, in the diagnosis and treatment of *diabetes mellitus*.

Very soon a much wider field in the investigation of these matters will be available to us in our hospital and private practice and it will be welcome to all those who realize and appreciate the inestimable worth and value of the efficient coworker in the laboratory.

In regard to the X ray side of our work it is here obvious that the specialist has again a very great advantage over the average practitioner not only in regard to the actual making of the picture, but in the interpretation of it which is of a great deal more importance. It is necessary for every practitioner to make himself familiar with the reading of an X ray film, not to be used as evidence against the X ray man, but in order that he may have a proper appreciation of every phase of the case with which he is dealing; even if mistakes are made by the tyro in the reading of the film as compared to that of the expert, he is less liable to error than if he fails to take a proper and regular interest in all the issues in a given case.

It should be impressed that all X ray films should be kept and properly indexed and suitably filed, so that reference can be made to them at a future date, if necessary. It is surprising how often the use of these old films comes in.

The report should be pasted to the case history and on no account should the original be allowed to leave the possession of the practitioner.

The process by which the facts are gathered together, has been given in more or less detail. It represents in fact a full half in the making of a diagnosis. It may be said, indeed, that the term diagnosis may be limited in its application to the process whereby the distinction is made between morbid states and this is the sense in which it is meant to be used here, but it applies equally to the result of the process of investigation. Diagnosis and morbid state or disease are often enough synonymous terms.

At the outset in order to make a correct diagnosis it is essential to have the fundamental principles of the diagnostic art. These are a sound knowledge of anatomical facts and more than a working knowledge of physiology and to these two are added a correct appreciation of how to examine a patient *in toto* and how to make a thorough inspection of the various regions and organs and a practical knowledge of the simple laboratory tests.

There is no royal road to the making of a correct diagnosis. Very few indeed are gifted with a special sense which directs them along the right road, so few are they that they are seldom met, but it is of vital importance to recognize the inestimable value of a wide experience in developing the art and the necessity of seeing every possible condition of morbidity as often as possible and of following the cases seen where possible to the operating theatre or to the *post mortem* room as the case may be.

It has to be insisted that the proper approach to the solution of a diagnosis is an appreciation of a rational sequence of events which compels to a certain conclusion and in that sequence there is the explanation in the mind of the observer from his knowledge of certain phenomena as to why the diagnosis is the correct one. It is hardly necessary to warn any against the futility of trying to make "spot" diagnoses, but we all do it more or less after a fashion and to demonstrate no doubt our own cleverness. The ability to make a spot diagnosis, if any, is born of experience and the wrinkle of the experienced man is of little use to the uninitiated, unless he can give with it the alpha and omega of his process of reasoning.

From the mass of accumulated data it is necessary to make a review and to pick out the salient points in the case for further thought and make an effort to allocate the condition of morbid change in some particular region. That is to say that it is quite easy to pick out from certain data in the history definite relationship to certain systems. For example it is perfectly obvious that if a history is given of pain in the chest, shortness of breath and swelling of the feet, then the case is one affecting the circulatory system and all the necessary data elicited in the physical examination can be grouped together and adequately surveyed.

The same idea applies to the other domains of the body; each can be reviewed rapidly and quite efficiently and the important facts classified and used, whether it be a lung condition or a stomach trouble or what not.

It may take days to get all the necessary facts together and properly sifted and the deductions made; it pays, however, to be slow in coming to a conclusion rather than hasty; a well balanced and well thought out opinion is worth a sheaf of hasty and ill considered judgements. There is a great deal of difference in the knowledge and the mental make-up of those who make up the great army of medical men. It is one of the anomalies of the practice of medicine to the lay mind and to ours, that two or three or more men will arrive at a different diagnosis from an exactly similar set of facts. It is not difficult to explain.

Very much depends on the training of the individual and it would appear that men trained in the same school have a tendency to think the same way and to make their deductions along a similar line of reasoning. But that is not all, else one would expect graduates of one university to be in accord and harmony on the subject of diagnosis, whereas we know that not to be the case.

Normal minds are more or less identical in type and receive and sift their ideas more or less similarly. They differ, however, in the meanings they gather from the facts submitted to them and this difference is accentuated by the extent of the knowledge of the observer and the rapidity with which the mind responds to the stimuli used.

The only way from the point of view of the safety of the patient is to make a diagnosis from as many accumulated facts as it is possible to get, to separate the wheat from the chaff and by solid reasoning and valid deductions to come to a conclusion as correct as the mental make-up and opportunities of the observer will allow, one that will allow the light of day to look upon it without even a surreptitious blush. It is wrong never to admit mistakes; it is simply a very pathetic and often disastrous form of deception and it never does any harm to admit failure.

One cannot know everything and it is only the fool and the rogue who claim infallibility; sooner or later they are found out to the lasting benefit of the suffering public.

Everybody makes mistakes; even the keenest brains make wrong deductions; the men of vast experience draw wrong conclusions when everything is in their favour and no stone left unturned to make their path to success primrose and easy, but the man who admits the difficulties of the making of correct conclusions and is willing to revise his opinion when the occasion warrants it, after he has used all the information he can gather and all the skill and knowledge he possesses, is worthy of the respect of each and every one of us and has in his make-up to a very high degree the invaluable non-marketable commodity known as common sense.

SPLENECTOMY IN ACUTE ESSENTIAL THROMBOCYTOPENIC (HÆMORRHAGIC) PURPURA.

By S. O. Cowen, M.D. (Melbourne),
Physician to Out-Patients, Melbourne Hospital.
(From the Walter and Eliza Hall Institute, Melbourne.)

Although splenectomy has come within the past few years to occupy an important place in the treatment of essential thrombocytopenic (or hæmorrhagic) purpura, its use has not hitherto been reported in this country. The history of a patient suffering from the acute form of the disease in whom the immediate result of splenectomy was strikingly successful, may therefore be of interest. A discussion of the diagnosis and the rationale of the treatment is appended to the case history.

Case History.

Mrs. L.S., *ætatis* twenty-seven years, was admitted to the Melbourne Hospital on February 4, 1925. She gave the following account of her illness: For the previous eight months she had felt weak and tired, but had not been at any time confined to bed. A week before admission to hospital the general malaise and weakness became much more pronounced; this she regarded as marking the onset of her present illness. There had been, however, no hæmorrhagic symptoms until two days later when a large ecchymosis developed quite unaccountably on her right leg and she began to bleed freely from the vagina. Steady oozing of blood from the gums commenced on the same day and had continued uninterruptedly. The onset of the bleeding coincided with the expected time of her menstrual period, but the vaginal loss was much more profuse than usual; after two days it abated a little, but on the morning of her admission it again became very free. The bruises increased in number and size until they practically covered her legs and arms. Small bleedings from the nose occurred on two occasions during the five days prior to her admission to hospital. She did not feel very ill, but was becoming alarmed by the freedom of the vaginal hæmorrhage.

She had never had an attack of this sort before nor was there a history of bleeding of any kind in the members of her family. Her husband is alive and well and there is one healthy child, three years of age.

When examined on admission she was comfortable and did not look exsanguinated. Her temperature was 38.3° C. (101° F.), pulse rate 96 and respirations twenty per minute. On the lower limbs and around the pubes were numerous large ecchymoses; in the centres of some of them were hard raised nodules, the results no doubt of gross capillary hæmorrhages into the skin. Similar hæmorrhagic areas were present on the upper limbs.

Scattered freely on the chest and interspersed among the ecchymoses on the upper extremities were innumerable petechiæ. There was oozing of blood from the margins of the gums around every tooth. The vaginal hæmorrhage was very free. Her breath smelt of fresh blood, but the fœtor which characterizes most of the acute blood diseases was conspicuous by its absence. The general physical examination revealed nothing abnormal except a badly lacerated cervix; in particular no enlargement of the spleen was detected.

The results of the blood examination were:

Red blood corpuscles 4,040,000 per cubic millimetre.
Hæmoglobin 70% (Sahli).
White blood corpuscles 11,000 per cubic millimetre.
Platelets: 10,000 per cubic millimetre.

Coagulation time (Dale and Laidlaw's method): 1 minute 30 seconds.

Bleeding time: 21 minutes.
Clot: Non-retractile.
Capillary resistance test: Positive.

The film was normal, except that no platelets were seen.

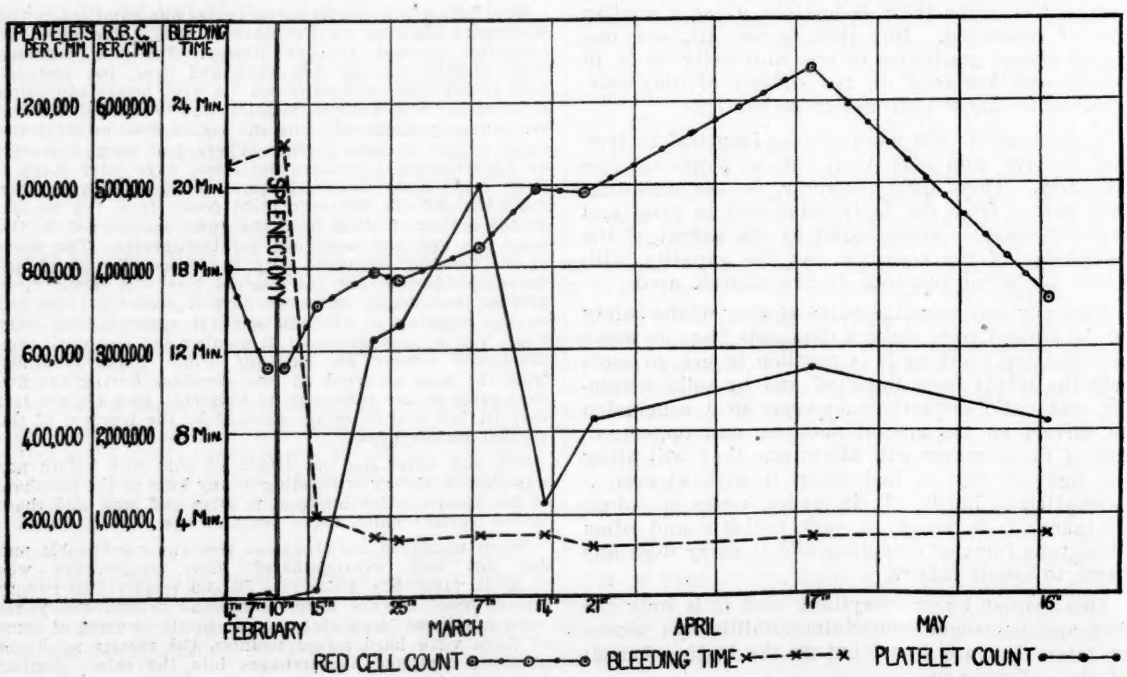
These blood findings confirmed the tentative diagnosis of essential thrombocytopenic purpura which had been suggested by the clinical features of the case.

During the five days following her admission the patient was treated energetically with the usual hæmostatic agents. An intravenous injection of ten cubic centimetres of whole blood was given daily for three days. On February 6 and again on February 8 fifty cubic centimetres of horse serum were injected intramuscularly. By February 9 in spite of these measures her condition had much deteriorated; her complexion had become very anæmic, the pulse rate had increased to 142 per minute and the fever continued, the temperature ranging from 37.8° C. to 38.8° C. (100° F. to 102° F.). On this day thirty cubic centimetres of 30% sodium citrate solution were injected intramuscularly and a transfusion of eight hundred cubic centimetres of citrated blood was given. Nevertheless, the bleeding from the vagina and the gums did not abate and fresh crops of ecchymoses and petechiæ continued to appear. On February 10, six days after her admission, the patient's condition was very serious; she was grossly exsanguinated, the red cell count had fallen to 2,800,000 per cubic millimetre and the hæmoglobin value to 35%. As all other measures had failed to check the bleeding, removal of the spleen was decided upon.

Splenectomy was performed on February 10 by Mr. Harold Dew. The patient was given two transfusions of eight hundred cubic centimetres of citrated blood, one an hour before and one an hour after operation. The spleen was perhaps slightly enlarged, but it was not adherent and its removal was accomplished speedily and without difficulty. Oozing from the edges of the abdominal wound continued freely throughout the operation, but it gradually lessened and finally stopped three hours later. The hæmorrhage from the gums ceased about the same time. The vaginal bleeding diminished progressively from the time of operation, but did not cease until four days later. The purpuric skin lesions cleared up rapidly and the hæmorrhages from the mucous membranes did not recur. Her convalescence was interrupted by the occurrence of a succession of furuncles which delayed her transfer to the Out-patient Department until April 7.

By April 23 the red cell count had risen to 5,400,000 per cubic millimetre and the hæmoglobin to 85%, while the platelets remained at the high level of 550,000 per cubic millimetre. The patient reported that she had commenced to menstruate on April 17 for the first time since her admission to hospital; the period had lasted five days and the amount lost was somewhat less than the usual. When last seen on June 11, that is four months after operation, she looked very well, but still complained of palpitation and weakness. She had had another normal menstrual period. There had been no recurrence of purpuric manifestations, but the blood examination showed considerable secondary anæmia. The gynæcological lesions which have undoubtedly retarded her convalescence and are probably responsible for her present symptoms, are shortly to be dealt with.

The more important blood changes are shown in the accompanying graph. For the sake of clearness the hæmoglobin percentage which roughly paralleled the red cell



Graph illustrating Blood Findings in Essential Thrombocytopenic Purpura before and after Splenectomy.

count, and the leucocyte count which showed no striking changes, have been omitted.

Pathological Findings.

The spleen weighed one hundred and twenty grammes. Macroscopically it appeared normal. Microscopic examination showed endothelial activity throughout the organ. The germinal centres of many of the Malpighian corpuscles were large and prominent. Proliferation of the endothelial cells lining the sinuses was well marked, so that the pulp in stained sections appeared pale and contained fewer lymphocytes than it does normally. The intimal cells of the capillaries and smaller arteries were hyptertrophied, occasionally to such an extent as to occlude the lumen of the vessel. There was no thickening of the reticulum and no increase in the fibrous tissue, either of the capsule or trabeculæ.

Discussion.

Terminology.

The use of the term purpura has in the past given rise to so much confusion that it must be accurately defined before proceeding to a discussion of the diagnosis of the case under review. The word was first used in English medicine in the middle of the eighteenth century as denoting the purple discoloration arising from hæmorrhage into the skin. Later it came to signify not only the skin lesions but also the hæmorrhages from the mucous surfaces which so often accompany them and it gradually acquired the implied distinction that the bleeding was not traumatic. In modern usage, therefore, purpura denotes spontaneous hæmorrhages developing in and beneath the skin and mucous membranes. Strictly speaking it signifies merely a symptom which may occur in the course of many different diseases. In some cases, however, it arises without any recognizable cause and dominates the clinical picture, so that the term "purpura" is often used with or without certain qualifying adjectives in a nosological sense. This double significance, which has led in the past to so much confusion, should be borne in mind.

Diagnosis.

The clinical picture presented by the patient under discussion, characterized as it was by the presence of multiple spontaneous hæmorrhages, suggested at once that she was suffering from an acute blood disease. Hæmophilia could be excluded owing to the sex of the patient. Moreover, in hæmophilia extensive purpuric skin lesions are unusual, the hæmorrhages are not spontaneous but follow some injury, however slight and the bleeding time and platelet count are normal though the coagulation time is greatly prolonged. It was, therefore, obvious that the case must be classed as one of purpura and it remained to decide in the light of further investigation to which type it conformed.

The purpuras may be divided into three groups:[1]

(i.) *Simple Symptomatic Purpura.*

Simple symptomatic purpura occurs in cerebrospinal fever, in ulcerative endocarditis and other microbial diseases. In these the purpura is as a rule but an incident of minor importance and the clinical picture is dominated by the features of the causal infection. The hæmorrhagic skin lesions which in susceptible individuals follow the taking of certain drugs such as iodine, also fall under this heading.

(ii.) *Idiopathic Purpura.*

In idiopathic purpura there is no definite general hæmorrhagic tendency and no persistent well-established diminution of platelets or other constant blood defect. The diseases included in this group—"simple" purpura, Henoch's and Schönlein's syndromes—are closely related to the erythema group of skin disorders. The clinical features of this case were such as to exclude the foregoing types and the lowered platelet count definitely assigned it to the remaining group.

(iii.) *Purpura Hæmorrhagica.*

The characteristic feature of *purpura hæmorrhagica* is diminution in the number of the blood platelets (thrombocytes). The term "thrombocytopenic purpura," though clumsy, is for obvious reasons rapidly displacing the older and more familiar name. Two varieties are recognized:

(*a*) Symptomatic, resulting from destruction of platelets by toxins, unrecognized as in aplastic anæmia or recognized, as in benzol poisoning, acute sepsis, diphtheria and certain other infections. Displacement of the parent cells of the platelets, the megacaryocytes of the bone marrow, by abnormal cells which sometimes occurs in lymphatic leuchæmia, pernicious anæmia and tumours of the marrow may bring about a like result.

(*b*) Idiopathic or essential, for which no recognized cause exists, occurring both in acute and chronic forms. The pathogenesis of this type is as yet obscure; some of the factors which play a part in its production, will be considered in the discussion of the rationale of treatment by splenectomy.

The absence of abnormal findings other than those attributable to secondary anæmia resulting from the hæmorrhages indicated that the case here described should be assigned to this last type. Further investigations showed that all the criteria for the diagnosis of acute essential thrombocytopenic purpura were present. These have been enumerated by Brill and Rosenthal[2] as follows: (i.) Reduction in number of the blood platelets. The average number in normal blood is 250,000 per cubic millimetre. The platelets vary from none to 100,000 in this disease; hæmorrhagic manifestations come into evidence when they fall below 60,000. (ii.) Preservation of the normal coagulation time of the venous blood; by Dale and Laidlaw's[3] method this averages one minute forty-five seconds. (iii.) Prolongation of bleeding time. Puncture of the lobe of the ear is normally followed by oozing of blood for from one to three minutes. In thrombocytopenia the oozing seldom ceases in less than ten minutes and may continue for hours. (iv.) Positive capillary resistance test. The application to the arm of a tourniquet sufficiently tight to prevent the venous return without obliterating the pulse is followed

by the appearance of a shower of petechiæ in the skin of the distal portion of the limb. (v.) Failure of clot retraction which normally commences shortly after blood has been placed in a glass tube and continues for some hours.

For the sake of completeness a further diagnostic requirement, originally suggested by Hayem,[4] should be added: (vi.) Absence of changes in the red and white blood cells other than those attributable to hæmorrhage.

Treatment.

A notable feature of this case is that the usual antihæmorrhagic measures vigorously prosecuted had no apparent effect. I feel, however, that the transfusions, although they did not lessen the bleeding, were of great value in maintaining the patient's general condition and minimizing the post-operative shock. Brill and Rosenthal[2] state that transfusion is "not only useless as a curative measure, but seems to increase the bleeding from the mucous surfaces and the number of purpuric spots in the skin." I cannot subscribe to this opinion and I agree with the majority of observers that transfusion should receive a thorough trial until it becomes obvious that the hæmorrhage cannot be arrested by this means. The amount of blood transfused should, however, be at least five hundred cubic centimetres; the small injections of whole blood given in this case appeared to be quite useless.

In the chronic type of essential thrombocytopenic purpura splenectomy has yielded uniformly successful results. Its employment in acute cases has been infrequent since the majority of these are controllable, by repeated transfusions. Engel,[5] indeed reports that two of three patients with acute purpura treated by splenectomy died and he is doubtful about its justifiability. That the risk is considerable in acute cases and during exacerbations of chronic ones there can be no doubt. Happily in this patient the end justified the means, but more evidence as to the results of splenectomy is required before it is adopted as a routine form of treatment. It is a common observation that patients with acute purpura often cease to bleed just at the moment when their condition is becoming desperate. Whether to wait for this happy consummation or to attempt removal of the spleen as the last resort of treatment before the patient is *in extremis* must be decided by the circumstances in individual cases. In general, however, it can be quite definitely stated that the operation should not be considered until all other methods of arresting the bleeding have failed.

The mechanism by which splenectomy cures essential thrombocytopenic purpura has not yet been elucidated. The operation was originally suggested quite independently by Frank, of Breslau, in 1915 and Kaznelson, of Prague, in 1916, but the reasons each advanced in support of his conclusion differed widely. Both, however, agreed that the reduction in the number of platelets was the immediate cause of the purpuric manifestations and regarded disorder of the function of the spleen which was enlarged in all their cases, as the causative factor. Frank considered the thrombocytopenia to be due to aplasia from an inhibitory action on the megacaryocytes of the bone marrow exerted by some substance produced in the spleen. Kaznelson on the other hand attributed it to abnormal destruction of platelets by splenic activity.

Experimental evidence while it lends some support to Kaznelson's hypothesis, has shown that the matter is much more complex than he suggested. In 1913 Ledingham[6] produced an antiplatelet serum which when injected into animals, caused typical *purpura hæmorrhagica*. More recently Bedson[7] has found that antispleen serum has the same effect and has shown that this is not due to the free blood contained in the organ. He has further demonstrated that splenectomy in the guinea pig causes an immediate rise in the number of platelets in the blood serum; this rise persists for three or four weeks. During this period no effect is produced in the splenectomized guinea pig by antiplatelet serum in a dose sufficient to cause fatal *purpura hæmorrhagica* in normal control animals. At the end of three or four weeks, however, the platelets of the splenectomized animal fall to the normal level; this is attributed by Bedson to the assumption of the functions of the spleen by other parts of the reticulo-endothelial system. After this fall has occurred, the normal susceptibility of the animal to antiplatelet serum returns. Bedson has also shown that in addition to the absence or almost complete absence of platelets from the circulating blood some lesion as yet unidentified of the capillary walls is necessary for the production of experimental purpura. His conception is that antiplatelet serum acts first upon the platelets and that, should the dose given be in excess of that required to destroy the circulating platelets, the unused portion acts on the endothelium of the small vessels, inducing that other change essential to the production of purpura. He concludes that the spleen is only indirectly concerned in the pathogenesis of essential thrombocytopenic purpura and that splenectomy cannot be expected to give any but temporary relief in this disease as it affects the human subject. This sweeping conclusion, based as it is entirely on the results of animal experiments, is disproved by the clinical results of splenectomy which indicate that some factor in addition to those suggested by Bedson's work must play a dominant part in the causation of essential thrombocytopenic purpura.

Analysis of the clinical results and in particular the behaviour of the platelets after splenectomy which might be expected to throw some light on the problem, confuses rather than clarifies the issue. It will be noted that in the case here reported the hæmorrhages stopped at a time when the platelets remained at a very low level and that there was after a few days an immense increase in the number of these elements. A month after the operation their numbers had dropped to normal, but subsequent counts gave higher figures. At the present time, four months after splenectomy, the platelets appear to be again declining towards the normal figure. Somewhat similar findings are recorded

by Bass and Cohen[8] and in one of their cases by Sutherland and Williamson.[9] On the other hand, Brill and Rosenthal[2] report an immediate post-operative rise in the platelet count. The later findings are variable. In some instances the count has remained high for months; in others it has fallen to and persisted at a figure as low as that which obtained before operation. And yet, despite these extraordinary variations in the behaviour of the platelets, the patients were clinically cured and remained free from hæmorrhages. It must be concluded that the thrombocytopenia is not, as has hitherto been held, the immediate cause of the purpuric manifestations, but is merely an associated phenomenon. Such a conclusion, it may be noted, does not vitiate the diagnostic significance of the diminished platelet count in essential thrombocytopenic purpura.

The morbid anatomy of the spleen throws no further light on the problem. Splenomegaly occurs in many of the chronic cases, but is unusual in the acute type of the disease. Endothelial activity which is the only abnormal feature noted in most of the recorded microscopic examinations, suggests increased functional activity, but it does not indicate whether the exalted splenic function is normal or perverted nor, indeed, does it incriminate the spleen as the primary cause.

One other point bearing on the pathogenesis may be mentioned. Brill and Rosenthal[2] noted that in both their patients oozing from the edges of the abdominal wound ceased immediately the splenic pedicle was clamped. This would suggest that cutting off the spleen from the general circulation had a dramatic effect in stopping the hæmorrhages. In the case under discussion bleeding from the superficial vessels continued for three hours. Similar findings have been recorded by other observers. No great significance can therefore be attached to Brill and Rosenthal's isolated observation.

The matter may be summed up as follows: Experimental observations and clinical findings do not as yet offer a reasonably complete explanation of the pathogenesis of essential thrombocytopenic purpura. Both, however, suggest that splenic activity and diminution of the platelets are intimately associated though not identical with the primary cause. Though the operation of splenectomy offers a means of clinical cure of the disease, the mechanism by which it does so remains obscure.

Acknowledgements.

I have to thank Dr. Oenone Bowman, Resident Medical Officer, for the time and care she expended in making the records of the case so complete and Dr. F. M. Burnet, the Senior Resident Pathologist, for his help with the platelet counts.

References.

(1) G. R. Minot and R. J. Lee: "Purpura Hæmorrhagica" in "Nelson's Loose-leaf Medicine," 1920.

(2) N. E. Brill and N. Rosenthal: "Treatment by Splenectomy of Essential Thrombocytopenia (*Purpura Hæmorrhagica*)," *Archives of Internal Medicine*, 1923, Volume XXXII., page 939.

(3) H. H. Dale and P. P. Laidlaw: "A Simple Coagulometer," *Journal of Pathology and Bacteriology*, 1911-12, Volume XVI., page 351.

(4) Quoted by J. M. Hitzrot: "Splenectomy in Hæmorrhagic Purpura," *Annals of Surgery*, August, 1923, page 185.

(5) D. Engel: Quoted in "Nelson's Loose-leaf Medicine" (Abstracts), November, 1924.

(6) J. C. G. Ledingham: "The Experimental Production of Purpura in Animals by the Introduction of Anti-blood-plate Sera," *The Lancet*, June 13, 1914, page 1673.

(7) S. P. Bedson: "The Effect of Splenectomy on the Production of Experimental Purpura," *The Lancet*, November 29, 1924, page 1117.

(8) M. H. Bass and P. Cohen: "Thrombocytopenic Purpura Hæmorrhagica successfully treated by Splenectomy," *American Journal of Diseases of Children*, 1924, Volume XXVII., page 323.

(9) G. A. Sutherland and B. Williamson: "The Treatment of Purpura Hæmorrhagica by Splenectomy," *The Lancet*, February 14, 1925, page 323.

Other interesting papers, not directly referred to in this communication are:

H. Z. Giffin and J. K. Holloway: "Hæmorrhagic Purpura," *Medical Clinics of North America*, 1923, Volume VII., page 241.

H. Z. Giffin: "Four Cases of Hæmorrhagic Purpura with Splenectomy," *Medical Clinics of North America*, 1925, Volume VIII., page 1153.

I. Cohn and I. I. Lemann: "Splenectomy as a Treatment for Purpura Hæmorrhagica," *Surgery, Gynecology and Obstetrics*, May, 1924, page 596.

TALIPES CALCANEUS.

By W. Kent Hughes, M.B. (London), M.R.C.S. (England),
Honorary Consulting Surgeon, Children's Hospital, Melbourne.

In *talipes calcaneus* the posterior end of the *os calcis* is depressed and the long axis of the bone tends to assume a more or less vertical position.

Treatment.

Talipes calcaneus is generally looked upon as the most unsatisfactory deformity resulting from poliomyelitis with which we have to deal. It is so chiefly because of the severe grade of paralysis that exists. Not only are the posterior set of muscles severely affected, but every foot muscle is hard hit and we have to deal with the foot that is almost of the flail variety. However, hope for success lies in the large amount of recovery that is possible, even in long standing cases in muscles affected by poliomyelitis that have escaped fatty degeneration.

Our first aim should be to endeavour to restore the foot to its proper anatomical form by orthopædic and surgical measures which are more than ordinarily slow in these conditions. We have two important matters to consider: (i.) The unfolding of the plantar flexion at the mediotarsal joints; (ii.) the restitution of the *os calcis*.

Talipes calcaneus is quite a different proposition in many ways to *talipes equinus*. The paralysis is more extensive. It is not so much a paralysis of the plantar flexors instead of the dorsal flexors as a more complete paralysis of the plantar flexors; for in *talipes equinus* the dorsal flexors are not so severely affected as they are in *talipes calcaneus*. This extensive damage makes *talipes calcaneus* a

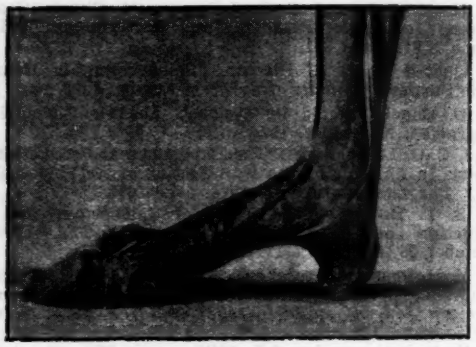


FIGURE I.
A Partially Dissected Foot with *Talipes Calcaneus.*

much more difficult and unsatisfactory proposition. Whereas in *talipes equinus* an operation nearly always results in a useful limb, in *talipes calcaneus* we can seldom do more than make the best of a bad job.

As in *talipes equinus* we have in *talipes calcaneus* plantar flexion of the foot at the mediotarsal joint. The *cavus* is more pronounced and sharper in curve owing to the approximation of the *os calcis* to the heads of the metatarsal bone. So though widely different at first sight, the initial stage of restoration is identical. That is to say we must deal first with the contracted tissues of the sole, but with the important difference that the anterior ligaments of the *os calcis* have to be freely divided in order to allow of its replacement to a horizontal position in its long axis.

The same incision is made along the inner border of the foot as in *talipes equinus* and the same structures are divided in the sole (see THE MEDICAL JOURNAL OF AUSTRALIA, August 15, 1925, page 186). In addition the ligaments attached to the anterior part of the *os calcis* are divided. The latter may present some difficulty to those who are not conversant with the operation. To render division easier it would be as well for such persons to approach this area from the outer side and in severe cases it may be necessary for everyone to do so. I have found restitution of the *os calcis* by this means much more satisfactory than excising wedges from the bone. In my opinion bone operation should be avoided in all paralytic deformities, as we have to deal with displacement and not with distortion. I have never yet operated upon the bone of any patient suffering from acquired *talipes equinus* or acquired *talipes equino-varus,* but I have done so on a number of occasions in *talipes calcaneus.* This, however, occurred only early in my career, before I recognized the possibility of overcoming the displacement of bone by orthopædic measures or by excising the fibrous structure of the sole.

FIGURE II.
A Case of *Talipes Calcaneus* of Severe Type with a Good Deal of Power left in the Dorsal Flexors.

FIGURE III.
A Case of *Talipes Calcaneus* with more Plantar Flexion in the Fore Part of the Foot and with less Depression of the *Os Calcis.* The partially dissected specimen, Figure I., shows clearly the new position of the *os calcis* in this deformity with a large amount of *cavus* that is not evident in the undissected foot.

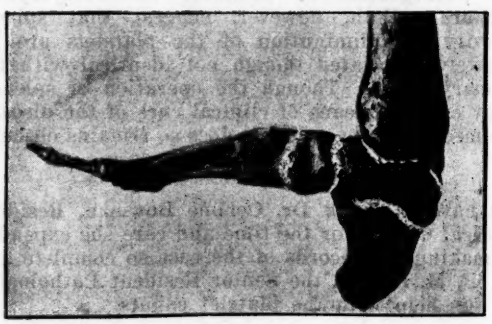


FIGURE IV.
The photograph of the skeleton shown in Figure IV. in which the dorsal flexors have retained some power, shows decided atrophy of the *os calcis* and a position of its long axis which has passed beyond the vertical line. Practically the whole of the *cavus* in this specimen is due to the position of the *os calcis.* Very little is caused by the plantar flexion of the fore part of the foot at the medio tarsal joints.

If there is any trouble caused by skin contraction in unfolding the cavus deformity, a horse shoe incision must be made round the heel of sufficient dimensions to enable the surgeon to slide the skin forward. The gap left must be filled in at his discretion most often by flaps, occasionally by implantation. When the *os calcis* is restored to its original position it is surprising how much power will return often to the muscles of the *tendo Achillis*. The foot is put up in a plantar flexed position on a back splint for three days and then put up in plaster on the lines described in the next paragraph.

In mild cases of *talipes calcaneus* it is sometimes sufficient to treat the condition with plaster bandages. The knee is held down by an attendant while the surgeon proceeds to apply the bandages. The first turn is made round the calf and then the bandage is taken round the leg. As the ankle is approached a turn is now taken under the heel and this pulled up hard in the attempt to dorsiflex the posterior end of the *os calcis*. A turn is next taken round the leg and the bandage is passed under the heel in the reverse direction in order to prevent the foot from being pulled into a *varus* or *vulgus* position. After this has been repeated twice the free end of the bandage is kept taut by another attendant while the surgeon proceeds to envelope the rest of the foot in plaster bandages and to open out the *cavus* portion of the deformity. He finishes by incorporating the free end of the heel bandage round the leg. Considerable force should be used in the first part of the application and the patient should not attempt to bear any weight on the foot for twenty-four hours. If shortening of the limb is present, as it usually is, one or two bandages are placed under the heel to make up for the deficiency. These are placed in position while attention is being paid to the cavus portion of the deformity. This application should be renewed once a week for the first month and then once a fortnight. This method will be of value only in mild cases and operative procedure will be required for the majority of patients.

When the time arrives for leaving off the plaster, a cork sole is inserted to make up the deficiency in the length of the limb and the patient is allowed to walk with a caliper splint. The time at which this can be left off varies so greatly that no time can be stated. The length of time varies with the amount of deformity of the upper surface of the *os calcis*. I do not think that anything has surprised me more than the amount of recovery that takes place in an apparently useless soleus and gastrocnemius muscle.

How long it is necessary to persevere with orthopædic measures is a matter for the decision of individual surgeons. All that can be stated is that they should be continued as long as any improvement is taking place. In most cases, however, operative procedure will be necessary. There is a wide field from which to choose, but for many years I have abandoned them all in favour of the method described above.

Talipes calcaneus approximates very closely to the deformity produced by bandaging the feet of Chinese women. I have seen several cases of *talipes calcaneus* following upon open division of the *tendo Achillis*. This barbarous method is still largely followed in Melbourne and the results as far as I have seen are appalling. When *talipes calcaneus* results, we have to go through the same measure as described above, first plaster treatment and then if necessary incision of the fibrous structures of the sole. When restitution has been accomplished, it will be necessary to deal with the scar tissue which has thrown the *tendo Achillis* completely out of action. After excision of the scar the surgeon has to decide how best to fill in the gap. It is generally advisable to bring a flap over from one side in order to obtain a central line free from scar tissue. In many instances it will be necessary to shorten the *tendo Achillis* and in one instance I passed a silk suture through the junction of muscle and tendon and fixed it below to the posterior end of the *os calcis*.

In those uncommon cases of *talipes calcaneus* in which no useful power is left in the *tendo Achillis* muscles and in which the *peroneus brevis* is strong, transplantation of this muscle is justified, but only after replacement of the *os calcis* has taken place. It must, however, be a bone to bone transplantation. The distal attachment of the *peroneus brevis* is lifted with a piece of bone attached and is replanted on the under surface of the *os calcis* in a bed hollowed out for it. It is no use suturing a strong tendon into a weak one.

What are we to do in cases in which hopeless paralysis is present? We have to consider: (i.) The permanent use of a caliper splint, (ii.) arthrœdesis of the ankle joint, (iii.) amputation through the knee joint.

Reports of Cases.

A CASE OF CYSTITIS CYSTICA ASSOCIATED WITH SEVERE HÆMATURIA.

By W. A. Hailes, F.R.C.S.,
Honorary Surgeon to Out-Patients, Melbourne Hospital;
AND
F. M. Burnet, M.D.
(*From the Walter and Eliza Hall Institute.*)

The condition known as *cystitis cystica* is usually dismissed as a pathological curiosity occasionally found in association with chronic inflammatory lesions of the urinary tract. The most extensive survey of the literature on the subject is that of Stoerk[1] who also reports a number of personally observed cases. In none of the cases described or quoted by him does the lesion appear to have been responsible for any definite symptoms. It was found not infrequently if carefully looked for in the *post mortem* examination of subjects with some chronic lesions involving the urinary tract, such as carcinoma of the uterus, renal calculus or chronic pyelitis. In the present case the histological appearances of the lesions corresponded entirely with those described by Stoerk, but the leading clinical feature was the severe degree of

hæmaturia and the absence of any associated lesion. These differences are of sufficient interest to warrant a report of the case.

E.P., a male, aged thirty-five, was admitted to the Melbourne Hospital on December 30, 1924, complaining of hæmaturia of nine months' duration. He stated that from childhood he had had abnormal frequency of micturition, passing urine one or twice during the night. Until nine months before the urine had always been clear, but at this period he noticed that it was red in colour after severe exertion such as a game of football. The occurrence of hæmaturia became more frequent and for ten days before admission the urine had been continually blood-stained. The first and last portions of urine passed seemed to be equally red. There was no pain or difficulty associated with micturition except a slight suprapubic pain just before the act which had been noticed for about a year. Recently he had noted some general weakness, but previously had always been well.

On examination the patient was found to be a strongly built, somewhat anæmic man in whom there were no clinical abnormalities. The urine contained large amounts of blood, but no other pathological constituents. It was acid in reaction and no organisms could be obtained by culture on ascitic agar. No abnormality was detected on X ray examination and the blood urea was within normal limits (thirty-six milligrammes per hundred cubic centimetres).

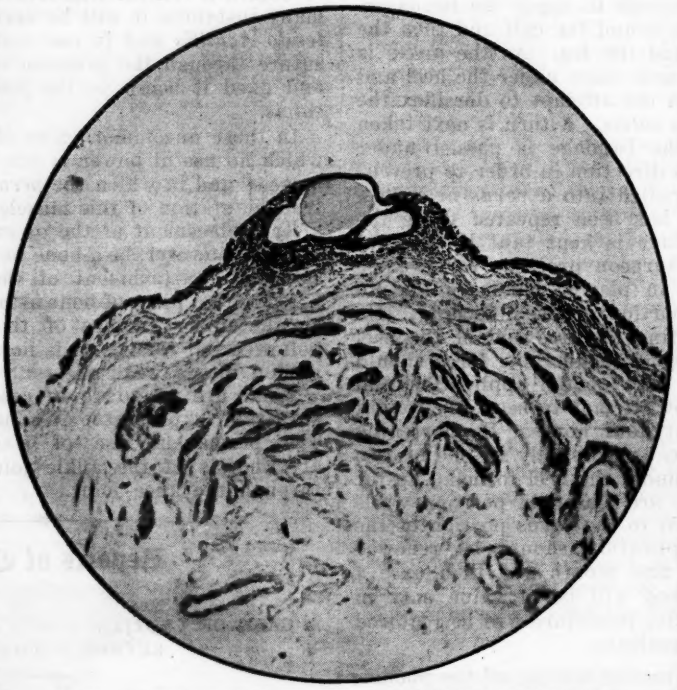
A cystoscopic examination was made on January 13 under local anæsthesia. The bladder was with difficulty cleared of blood clot and when the clot was finally removed, it was noticed that lotion appeared opalescent on its return even when sterile distilled water was used. The base of the bladder showed numerous nodular elevations of very variable size and darker in colour than the surrounding mucosa. The appearance was regarded as that of a widespread carcinomatous infiltration in the submucous tissues. Examination was difficult on account of bleeding and neither of the ureters was catheterized. It was decided to open the bladder at a later date.

On January 15 under general anæsthesia the bladder was opened suprapubically. Hundreds of small glistening sessile bodies resembling sago granules were seen attached to the mucosa. They varied in size, the largest being about four or five millimetres in diameter and were scattered over the whole mucosal surface, but were much more numerous at the base. Blood-stained urine was seen to be coming from the right ureter and a specimen was obtained by ureteric catheterization. The condition was then thought to be one of multiple papillomatosis of the bladder secondary to a malignant papilloma of the right renal pelvis, but it was recognized that the bladder appearances were rather atypical and suggested an infective lesion of some sort.

The individual lesions were destroyed as far as possible with a Paquelin cautery after a typical one had been removed for histological examination. The bladder was then rapidly washed out with a 5% solution of silver nitrate and closed with suprapubic drainage, the excess having been removed by aspiration. It was decided to remove the right kidney and the whole length of the ureter and this was done on January 22. A right-sided nephrectomy with excision of the upper two-thirds of the ureter was performed and in order to destroy completely the mucosa of the remaining portion of the ureter, a diathermy electrode was passed into the bladder from the divided end of the ureter and slowly withdrawn. The wound was then closed.

By February 12 the suprapubic wound had closed and hæmaturia had ceased, though there was still pyuria associated with a coliform organism. Cystoscopic examination showed none of the original lesions and only some evidence of a low grade chronic cystitis. The patient was then discharged from the hospital with instructions to return for cystoscopic examination in two or three months.

On April 28 he was again examined. The bladder appeared quite normal and there had been no recurrence of hæmaturia. The anæmia had disappeared and he had gained nineteen kilograms (three stone) in weight.



Section of Ureteric Lesion Showing small Cysts, one containing Colloid Material. × 30.

Pathological Examination.

On opening the kidney removed at operation a number of small cystic lesions could be seen on the mucosa of the pelvis and ureter. The kidney itself appeared to be normal. The mucosal cysts were mostly oval in shape and fairly uniform in size, the longest diameter being usually about two to three millimetres. Their colour varied from a light brownish-yellow to almost complete transparency. The contents of one of the yellowish cysts examined unstained showed small clumps of epithelial cells, most of which were greatly elongated, as well as a good deal of granular *débris*. There were no leucocytes present, no organisms could be grown from the material and a guinea pig injected with some of it remained healthy. About twenty of the cystic lesions could be counted on the pelvic mucosa and the upper seven or eight centimetres of the ureter. They were irregularly distributed from the depths of the calyces to the ureter and no special region seemed to be particularly involved.

Two such lesions from the ureter were examined histologically in serial sections. The first consisted essentially of a single flattened vesicle, without any visible contents, from which a few small loculi projected. The vesicle was lined with epithelium of the urinary type which varied considerably in thickness, in places consisting of only one layer of cells. The cyst projected a little above the general level of the normal epithelium and was separated from the lumen of the ureter by a thin layer of connective tissue containing numerous lymphoid cells, but without any epithelial covering. No point of connexion could be made out between the epithelial lining of the cyst and the general epithelium of the ureter.

Around the lesion there was a moderate increase in the number of small round cells.

The second lesion was of more complex nature, being composed of a twisted and partially intercommunicating system of cystic structures. As in the first there was practically no epithelium on the superficial aspect of the lesion, but a structure continuous with the basement membrane of the adjacent epithelium could be seen and a few small groups of epithelial cells were found upon it. The cysts were lined with variable thicknesses of epithelium and the larger ones contained an eosin-staining material resembling the "colloid" of the thyreoid gland. One small cyst opened directly on to the lumen and its epithelial lining appeared to have been in direct continuity with that of the normal ureter, but no actual connexion was present and the appearance may have been an artefact. The cysts were supported by a loose connective tissue closely packed with round cells of a lymphoid type and containing numerous capillaries. The figure represents a microphotograph of a typical section of this lesion.

The papillomatous outgrowth removed from the bladder proved on section to be essentially similar in structure to the ureteric lesions. A complex assemblage of loculated cysts, the largest about one millimetre in diameter, was held together by loose connective tissue which showed no inflammatory changes or round cell accumulation. The cysts were lined with transitional epithelium, in some many-layered, in others pressed out into a single sheet of flattened cells, but in places showing all intermediate forms. Most of them contained structureless eosin-staining "colloid" material. The free surface of the lesion was bare of epithelium.

Comment.

In its pathological features the case corresponds to the conditions described as pyelitis, ureteritis or *cystitis cystica* which are considered by Aschoff[3] and other German authors as being due to enlargement and cystic degeneration of small epithelial structures, occurring in the normal submucous tissues of the urinary tract. The origin of these "epithelial nests" of von Brunn is disputed, but they probably arise in early life and develope to different degrees in different subjects. Such development and cystic change is initiated or accelerated by chronic inflammatory processes and possibly by chemical irritants excreted by the kidney (Aschoff).

The history given by the present patient of some abnormal frequency of micturition for many years may possibly indicate the presence of such slight congenital lesions in the mucosa of the bladder trigone, but the stimulus leading to their development and to the occurrence of hæmaturia is quite obscure. In this connexion it was thought worth while to follow up some information volunteered by the patient. He stated that while dairying in the Mount Gambier (South Australia) district he had on several occasions in the last two years made *post mortem* examinations of cattle that had died from a disease endemic in the district. In these animals the only symptom noted was hæmaturia ("redwater") with gradual wasting. At the *post mortem* examination the bladder was found to contain lesions which from his description seemed rather similar to those found in his own case.

This disease has been endemic in the district for at least forty years and apparently in Australia is confined to two regions—Mount Gambier and the surrounding district for a radius of about fifteen miles and part of the south coast district of New South Wales. The disease in the latter locality was investigated by Cleland[3] [4] who drew attention to its possible relation to pentastomiasis and from a comparison of a bladder obtained from Mount Gambier with his description the disease is evidently the same in both localities. The hæmaturia depends on the presence of a small number of submucosal hæmangiomata in the bladder, but in addition there are papillomatous lesions of typical structure and other irregular proliferations of epithelium with some cystic change. No real analogy in histological appearances with the lesions in the human case could be detected, but as the ætiology of the disease in cattle is still uncertain, a common factor may have been involved.

It is quite conceivable that some chemical or infective irritant which can cause proliferative changes in the epithelium and capillaries of the bladder in cattle may in a human being with some slightly abnormal epithelial structures in the urinary tract, provoke these to cystic overgrowth. No definite evidence on the point has been obtained and the supposition is purely speculative. The coincidence of the two conditions, however, seems sufficiently striking to be reported and it is hoped that any similar cases that may be observed in the areas in which the bovine disease occurs, will be considered with a view to possible relationship between the two diseases.

We are greatly indebted to Dr. H. R. Hawkins, of Mount Gambier, for his assistance in obtaining a specimen of the bovine lesions and for much information regarding the prevalence and distribution of the cattle disease in the district.

References.

(1) O. Stoerk: "*Beiträge zur Pathologie der Schleimhaut der harnleitenden Wege*," *Beiträge zur Pathologische Anatomie und zur Allgemeine Pathologie*, Ziegler, 1899, *Band* XXVI., *Seite* 36.

(3) L. Aschoff: "*Pathologische Anatomie*," 1921, 5 *Auflage*, *Zweiter Band*, *Seite*, 509.

(3) J. B. Cleland: "Report of Government Bureau of Microbiology, New South Wales, for 1909," Sydney, 1910, page 406.

(4) J. B. Cleland: "Endemic Hæmaturia (Illawarra Redwater) in Cattle, due to Angiomata in the Bladder: Its Possible Relation to Pentastomiasis," *Journal of Tropical Veterinary Science*, Volume VI., No. 2, 1917.

Reviews.

BRONCHOSCOPY AND ŒSOPHAGOSCOPY.

Dr. Chevalier Jackson is undoubtedly the world's foremost authority on the endoscopy of the respiratory and upper digestive tracts. His contributions to the literature of this subject appearing in the leading medical journals are always widely appreciated. His large work "Peroral Endoscopy and Laryngeal Surgery," issued some years ago, is the most comprehensive and authoritative presentation of the subject yet published.

A book based on an abstract of this work has now been produced by Dr. Jackson which sets out clearly and succinctly in a volume of handy size well illustrated with diagrams, half tone reproductions and skiagrams as well as excellent coloured plates the technique of bronchoscopy and œsophagoscopy.[1]

Dr. Jackson has endeavoured to anticipate any difficulties with which the tiro may be confronted and his descriptions of procedure are clear and explicit. The instrumentarium, a most important consideration, is fully dealt with and freely illustrated. The only types of tubes mentioned are those of his own devising with distal lighting and the instruments advised for use are those of proved effectiveness in his own hands. The brilliant success attending his own practice, as well as that of the large numbers of surgeons who follow his teachings, is the best criterion of their value. He devotes considerable space to the discussion of the removal of foreign bodies from the air and food passages and a large section of the volume is concerned with diseases of these parts and their treatment by endoscopic methods.

An excellent chapter outlines his views on tracheotomy, but he differs from many British laryngologists, in depre-

[1] "Bronchoscopy and Esophagoscopy: A Manual of Peroral Endoscopy and Laryngeal Surgery," by Chevalier Jackson, M.D., F.A.C.S.; 1922. Philadelphia and London: W. B. Saunders Company; Melbourne: James Little; Royal 8vo., pp. 346, with four plates and 114 illustrations. Price: 27s. 6d. net.

cating the performance of this operation in the case of foreign body removal.

The book should prove of the utmost assistance to the junior surgeons. The information conveyed is concise, thorough and convincing, the style lucid and graphic and the method of arranging the sections makes for ready accessibility. There is a three-page bibliography and an unusually fine index of thirty-one pages.

Analytical Department.

"MILK EMULSION."

THE name "Milk Emulsion" has been adopted as a trade mark for Faulding's emulsion of cod liver oil with hypophosphites. The emulsion is prepared by Messrs. F. H. Faulding & Company, Limited, at their works at South wark, Adelaide. The label attached to the bottle in which the preparation is marketed, states that it contains "pure Norwegian cod liver oil in a palatable form, in combination with the hypophosphites and glycerophosphates of lime and soda" and that it is "recommended by the medical profession in cases of consumption, coughs, colds, glandular swellings, chronic bronchitis and wasting diseases generally."

In a pamphlet accompanying the bottle the manufacturers state *inter alia* that "Milk Emulsion" contains lactose, is not prepared by the use of alkali and is definitely acid in reaction. The acidity of the product is described as a "distinctive property which hastens the period of absorption and enables the immediate energy requirements to be supplied with promptness." Emphasis is laid on the value of cod liver oil in the treatment of tuberculosis; "Milk Emulsion" is stated to be particularly useful on account of its being easily digested and quickly absorbed. Reference is made to the phosphorized fats as "a group of substances which contribute to the building up of nervous tissues" and the nutritive value of lecithin and allied glycerophosphates is pointed out.

Mode of Preparation.

Our representative arranged to inspect the factory of Messrs. F. H. Faulding & Company, Limited, and he was enabled to view the whole process of the preparation of "Milk Emulsion" and to collect samples of the ingredients and of the completed product.

Two motor-driven churns, each of thirty gallons capacity and a mechanical emulsifier are used. The ingredients are thoroughly mixed in the churns for an hour and a quarter. The mixture is then drawn through the emulsifier, from which air is excluded. Thence the emulsion is run into bottles and each bottle is immediately corked.

The whole process is conducted in a thoroughly hygienic manner. The apparatus was inspected before use and found to be perfectly clean. The ingredients are taken direct from the original containers; the required amounts are measured out and poured into the churns. The whole process from this stage to the corking of the bottles is mechanical and no handling of the materials occurs. There is no possibility allowed for contamination in any way.

Attached to the works is a well equipped laboratory and a trained staff of chemists carefully tests the purity of each batch of ingredients and of each batch of completed product.

Our representative took the opportunity to inspect other portions of the factory and to view the preparation of a number of other articles sold by the firm. Everywhere was evidenced careful attention to hygienic details. The employees were clad in clean white overalls and appeared fully seized with the necessity for extreme care in their duties.

Adjacent to the works are comfortably furnished club rooms and dining halls for the use of the employees and a pleasant garden is in course of development.

Purity of the Ingredients.

The oil used in the preparation of "Milk Emulsion" is imported from Norway. Most of the other ingredients are obtained from reliable London drug houses. The laboratory staff makes careful tests of each batch of drugs to insure their compliance with the requirements of the British Pharmacopœia.

Samples of the various ingredients were taken by our representative and subjected to careful chemical examination.

The cod liver oil appeared a good sample; it was clear, pale yellow. Analysis gave the following results:

Quality Tested.	B.P. Standard.	Sample Examined.
Saponification value ..	179 to 192	188
Iodine value	155 to 173	171
Acid value	Not more than 2.5	1.76
Refractive index at 40° Centigrade	1.4704 to 1.4745	1.4708

The refractive index was determined at room temperature and correction made in the manner required by the British Pharmacopœia, 1914, Appendix VIII.

The sample of glycerine examined conformed to the requirements of the Pharmacopœia relating to specific gravity, absence of formic acid, of fatty acids and of sugar.

The sample of lactose required only 0.3 cubic centimetres of decinormal solution of sodium hydroxide per 5 grammes lactose to neutralize; the British Pharmacopœia allows up to 1.5 cubic centimetres. Sucrose was absent.

The gums acacia and tragacanth used in the preparation were good specimens; the hypophosphites and glycerophosphates of calcium and sodium, the flavouring agents and accessory ingredients responded satisfactorily to selected tests applied.

The Completed Product.

A sample obtained at the works and a sample bought over the counter of a city pharmacy were examined and compared. They were found to agree in all essential particulars.

"Milk Emulsion" is a milk white, somewhat viscid fluid. Microscopic examination shows the oil to be in an extremely fine and even state of emulsification.

The product is acid in reaction: 10 grammes of the emulsion required 2.4 cubic centimetres of decinormal solution of sodium hydroxide to neutralize.

Determined by the saponification method the oil content (by weight) of the sample obtained at the factory was 30.3%, that of the bought sample was 29.9%.

The mixed hypophosphites and glycerophosphates constitute 1% of the emulsion.

Summary.

The mode of preparation is satisfactory; no alkali of any sort is used and the vitamin content of the oil is not liable to be impaired. Thorough attention to cleanliness is observed.

The ingredients are of good quality and proper means are adopted by the manufacturers to ascertain their purity.

The final product is an excellent emulsion of cod liver oil, containing 30% of oil and 1% of phosphorus compounds.

In cases where the administration of cod liver oil is indicated Faulding's "Milk Emulsion" provides it in a palatable form which most children relish.

Analysis of the ingredients and of the completed product, carried out by our representative, substantiates the claims of the manufacturers.

The Medical Journal of Australia

SATURDAY, SEPTEMBER 5, 1925.

The Venereal Disease Campaign.

Dr. E. H. Molesworth's motion at a recent meeting of the New South Wales Branch of the British Medical Association as reported in last week's issue will be regarded as an honest and praiseworthy attempt to bring about a more satisfactory state of affairs in regard to the control of venereal disease. Venereal disease affects the nation as a whole. It takes its toll in the lives, the physique and in the health of the community. It affects those who have contracted disease through carelessness, those who are affected through no fault of their own, and it makes its appearance in the new born. This being so, it is necessary that the State should make efforts by legal enactment to prevent and to eradicate it. Venereal disease acts with their regulations regarding notification and so forth cover but one aspect of the question. Of equal importance is the enlightenment of the public in regard to the nature, incidence and prophylaxis of these maladies. The education of the public is nowadays possible to an extent not previously known. The "conspiracy of silence" has been broken. Subjects formerly taboo may be and are discussed in the open, though this is not perhaps done always in a way which conveys necessary and useful information.

Instruction in regard to the facts of life and the nature and dangers of venereal disease should be given to boys and girls before they have to face the world as young men and women. Although it is recognized that this is necessary, no definite plan or method has been devised for this instruction. As Dr. P. Fiaschi has pointed out, the doctor tries to pass on the work of teaching the young to the father and the father pushes it on to the parish priest. It is unfortunately a counsel of perfection that the parent should instruct his child as to the dangers and problems which he will have to meet. In the large majority of instances the knowledge of the parent is not sufficient and his method of presentation would be unwise, even if he had the moral courage to undertake the duty. The question is chiefly a medical one and the medical practitioner should be the instructor. At the same time it must be admitted that there are parents who, acting according to direction from the medical practitioner, would be able to impart the necessary information. It is thus the duty of the family medical attendant to suggest to the parent that teaching is necessary. The question naturally arises as to what should be done in the event of a parent refusing to give instruction or to allow the doctor to give it. It is here that the second method of attack can be launched. The school medical officer should be entrusted with the duty of teaching the older children the necessary facts. It must be part of his or her routine. The girls can be taught by women and the boys by men. The school master or mistress is not the person to handle the problem. At the present time school medical officers in some districts give lectures to the children on subjects connected with personal hygiene. There is no reason why arrangements should not be made for instruction of a prescribed nature to be given to the older children in all schools by suitably chosen medical officers.

Teaching given to young adolescents after they leave school will necessarily be of a more specific and detailed nature. Under Utopian conditions each factory and workshop or group of such will have its medical officer of industrial hygiene. This individual will be able to help and advise in regard to matters venereal as well as the other factors which lie within his special province.

If every member of the community in his or her youth received adequate instruction in regard to the nature of venereal disease, it might not be thought necessary to undertake the wide dissemination of knowledge amongst the general public. It is certain, however, that under the most ideal conditions some persons would be missed, some would not understand all that was required, and some would need to be reminded over and over again. Moreover, prophylaxis is an aspect of the question that must be brought before adults. In addition to this the subject of venereal disease must be

illuminated from all its angles, if attempts with any hope of success are to be made to mitigate the social conditions which either directly or indirectly bring about venereal infection.

Much valuable work has been done in Great Britain by the National Council for Combating Venereal Diseases and by the Society for the Prevention of Venereal Disease. These two societies have held divergent views as to the best methods of fighting venereal disease and much energy has been wasted by each in mutual antagonism. More effective action may now be expected, for a liaison committee has been formed between them under the presidency of Sir Auckland Geddes, a medical man, who is president of each society. The National Council for Combating Venereal Diseases has recently changed its name and is known as the British Social Hygiene Council. In a recent manifesto the Council has pointed out that it is extending its work to include the fostering of character training of the young. It advocates basing habit formation on a knowledge of the facts of life and on the attainment of right conduct through consciousness of social and racial responsibility. The Council is working for the eradication of all known forms of commercialized vice and the promotion of adequate facilities for recreation and diversion. In Australia the Australian Society for Fighting Venereal Disease, of which Sir James Barrett is President, is not idle in the conduct of its campaign. It is not necessary to discuss further the methods of societies such as these. The popular magazine on health which it is hoped may be started by the Australasian Medical Publishing Company, Limited, would be an excellent medium for public instruction in this matter.

Another means of attacking the diseases in question was mentioned by Dr. Fiaschi in the discussion to which reference has been made. He pointed out that he always instructs a patient suffering from venereal disease in regard to prophylactic measures which may avert a second infection. This is worth remembering, for second infections, particularly of gonorrhœa, are by no means uncommon and constitute one of the most prolific means of spreading disease.

Current Comment.

THE ORIGIN OF CANCER.

THE LANCET of July 18, 1925, containing the articles of Dr. W. E. Gye and Mr. J. E. Barnard, F.R.S., has just arrived from England. Although a full description of the work is not included in either article, sufficient details are available to enable the reader to form an opinion concerning the nature of the evidence, the validity of the tentative conclusions and the general significance of the work.

Dr. Gye started his investigations by endeavouring to determine the factor or factors on which the transmission of certain sarcomata of fowls depend. These tumours were described by Peyton Rous in 1911. The apparently peculiar character of these tumours, that they can be transmitted from chicken to chicken by inoculating dead cells or by injecting a cell-free filtrate of the tumours, has attracted considerable attention. With the possible exception of a lymphosarcoma of dogs mammalian malignant neoplasms have been transmitted by the grafting of living tumour cells, but not of dead cells. Dr. Gye used special methods of filtration for his experiments. Portions of tumour were removed with great care under strictly aseptic conditions. The pieces were minced with scissors and then rubbed in sterile sand in a Wedgewood mortar. To each gramme of tumour one hundred cubic centimetres of Ringer's or normal saline solution were added. The muddy suspension was then filtered through layers of paper pulp and sand and the resulting faintly yellow transparent fluid was passed through a Chamberland L_2 or Mandler candle. A trace of silica was added to the filtrate. This filtrate when introduced into a chicken led to the formation of a palpable tumour in fourteen days and to the death of the bird within twenty-eight days. When small quantities of the cell-free filtrate were used, the tumour appeared later. He then sought to cultivate any living organism that might be contained in the filtrate or tumour tissue. Pieces of tumour weighing about 0.5 gramme were placed in five cubic centimetres of broth and incubated anaerobically at 37° C.. The supernatant fluid remained "infective" for four days under these conditions. When the broth medium contained rabbit serum and potassium chloride, the "infectivity" was retained for three days. When glucose, maltose or lævulose was added to the medium, the P_H of the fluid was raised to 4.0 or 4.5. Under the influence of a fermentable sugar the period during which the fluid remains "infective" tends to increase. Dr. Gye states that the impression he has gained from his experiments is that an "agent" diffuses from the tumour tissue into the medium and that it disappears slowly in the presence of rabbit's serum and under anaerobic conditions and more rapidly in the presence of oxygen and absence of serum. The larger pieces of tumour remain infective for a longer period than the smaller, because they contain more "agent."

Rous found in 1913 that the agent responsible for the development of his chicken tumours after injec-

tion of a filtrate into healthy birds was destroyed by carbolic acid, toluene and chloroform. Dr. Gye has confirmed this and gives details of the method he has devised to render his sand filtrate inert by chloroform. It appears that saturation at 37° C. is an essential for complete destruction of the agent. He suspected that this loss of activity was due not to the death of a virus, but to the disappearance of an accessory chemical factor which "governs infection of cells." This accessory factor, he states, is obtained by killing the virus with chloroform. The experimental evidence for this consists in the following. A fragment of Rous tumour was placed in five cubic centimetres of rabbit serum-glucose broth and incubated anaerobically for three days. The clear sand filtrate of this culture was then treated with chloroform and the chloroform was removed. No tumour resulted from the inoculation of one cubic centimetre of either the culture or the treated filtrate, but a tumour developed on the twenty-first day after the inoculation of 0.5 cubic centimetre of culture together with the same quality of filtrate. He holds that the treated filtrate contains a labile chemical substance which renders the cells susceptible to infection by the virus contained in the culture. In order to test the accuracy of this interpretation he endeavoured to separate the virus from the chemical factor by spinning in a centrifuge. A rabbit serum-glucose broth culture of Rous tumour was incubated under anaerobic conditions for five days. The supernatant fluid was removed by pipette. Its acidity was between P_H 5.0 and 5.5. The fluid was then spun for two hours at nine thousand revolutions per minute. The upper portion of the fluid was removed with great care. The same quantity of fluid including the deposit was also removed from the bottom of the tube. These samples were injected into the two breasts of a chicken. After twenty days the chicken died and a very small tumour was found in the breast which had received the upper clear fluid, while a relatively large tumour was found in the breast which had received the deposit. In another experiment no tumour formation resulted from the injection of one cubic centimetre of the clear upper fluid, while 0.5 cubic centimetre of the deposit gave rise to a tumour. In this experiment the centrifuge tube had been coated with agar. The agar became detached during the spinning and was included in the deposit. He found that although the deposit lost its power of producing tumours as a result of two washings in saline solution, the power could be restored by the addition of supernatant fluid. He interprets this as evidence that the virus is not removed from the deposit by washing, but only the chemical factor. It appears that in two out of fifteen experiments tumours developed after inoculation with washed deposit.

The work aiming at the graphic demonstration of the virus was undertaken by Mr. Barnard with the collaboration of Dr. Gye. A description of the method and technique must be deferred for the present. He was able to see and to photograph the virus of pleuro-pneumonia which he judges measures about 0.2μ in its greatest diameter. His employment of ultra-violet illumination renders it possible to give an image of an isolated element of structure down to an order of size of 0.075μ. Dr. Gye's tumour cultures, like the cultures of the virus of pleuro-pneumonia, contain spheroidal bodies on the periphery of which particles are attached. These particles remain attached by means of a fine pedicle while they develope. These bodies cannot be seen in any stained preparation. The cultures were made in broth containing potassium chloride and rabbit serum and a fragment of embryo chicken. Subcultures were made each four days. Dr. Gye estimates that the loopful used to inoculate the successive subcultures represents a dilution of not less than one in a thousand. Tumours were produced by inoculating one cubic centimetre of a fifth subculture or 0.5 cubic centimetre of supernatant fluid with 0.5 cubic centimetre of a fifth subculture. Tumours were produced with an eighth subculture.

Many of the experiments were repeated with mammalian malignant neoplasms. These included a spindle celled sarcoma of the mouse, a Jensen rat sarcoma, a mouse carcinoma and a rat carcinoma. The mouse sarcoma was reproduced by the inoculation of a cell-free filtered culture. The chemical factor of Rous tumour obtained by treating the sand filtrate with chloroform together with a culture of mouse carcinoma induced a tumour in a chicken, while neither the filtrate nor the carcinoma culture alone led to any tumour formation. The non-specific factor was obtained from each of the three mammalian tumours mentioned. In every case the tumour induced in the chicken had a structure indistinguishable from that of a Rous tumour.

Three human tumours were studied, a scirrhous carcinoma of the breast, a sarcoma of the thigh and an adeno-carcinoma of the breast. Cultures obtained from the first were contaminated and the endeavour to produce a tumour in a chicken failed. Failure also followed the attempt to produce a tumour from the sarcoma. A tumour resulted from the inoculation of the specific factor of a Rous tumour together with 0.5 cubic centimetre of a culture of the human adeno-carcinoma.

From the evidence at present available it must be recognized that Peyton Rous's chicken tumour can be reproduced by inoculating into a healthy chicken a cultured virus and a substance gained from the tumour cells or virus. In the next place the virus obtained from certain mammalian tumours can be substituted for the virus obtained from the chicken sarcoma. Dr. Gye claims that the specific factor is a chemical substance and not a living organism. He gives reasons for denying that it is analogous to a toxin. It is impossible from the information at hand to express any opinion on this point. He offers no evidence save in connexion with a mouse sarcoma to justify the assumption that the virus gained from the mammalian tumours has any ætiological connexion with these tumours. Neither does he show that these mammalian tumours with the one exception can be reproduced in a manner similar to that employed in the case of the chicken tumours.

Abstracts from Current Medical Literature.

BACTERIOLOGY AND IMMUNOLOGY.

Malarial Parasites in Placental Blood.

B. Blacklock and R. M. Gordon (*Annals of Tropical Medicine and Parasitology*, March, 1925) record the finding of malarial parasites in the placental blood of 46% of twenty-six native women in Freetown. The placentas were usually examined within twelve hours of expulsion. Blood was withdrawn from the bottom of an incision through a cauterized area on the surface of the placenta and films stained by Leishman's or Giemsa's stains. The maternal peripheral blood was examined at the time of birth in twenty-three of these persons, but parasites were found in only four, that is 17%. In every case the placental blood showed a much heavier infection than the maternal peripheral blood. In twenty-six instances blood from the umbilical cord was examined for the presence of parasites, but none were found. Examination of blood from the veins of the membranes also failed to reveal the presence of any parasites. Films of the peripheral blood of twenty-four new-born children were examined, but no infection was found. Repeated examinations of children born of mothers with placental infection were made up to a week after birth and no parasites were found. In the placental blood sporulating parasites were numerous and also young and half-grown forms. The placental blood provided certain conditions known to be necessary for the cultivation *in vitro* of *Filaria falciparum*, namely stagnation of blood, limitation of oxygen and presence of glucose. Some evidence was collected which suggested that malarial infection of the mother predisposes to accidents during pregnancy or at birth.

Susceptibility to Diphtheria with Reference to the Inheritance of Blood Groups.

Hanna Hirszfeld, L. Hirszfeld and H. Brokman (*Journal of Immunology*, November, 1924) state that they have examined in fifty families the Schick reaction in conjunction with the serological groups. In view of the fact that the serological groups are unquestionably inherited, they investigated as to whether bacterial antibodies are inherited with them. In forty-two of the families both parents were examined, in eight one parent only. In all the groups immune as well as susceptible individuals were met. Therefore it appears conclusive that immunity or susceptibility to diphtheria is not closely connected with either of the biochemical properties of blood. It was found possible to divide the families examined into three groups. Group I. consisted of parents each of whom did not react to the Schick test. This group comprised eighteen families including fifty-one children. Group II. consisted of families in which both parents reacted. This group included five families with eight children. Group III. consisted of families in which one parent reacted to the Schick test and the other did not react. Eighteen families with fourteen children were found in this group. The results were as follows. When both parents were susceptible all the children were susceptible. When both parents were immune the children were generally immune, but susceptible children were occasionally met. When one parent was immune and the other susceptible, the children with the serological group of a susceptible parent were always susceptible, while children who inherited the group of an immune parent were mostly immune, although occasionally susceptible children were encountered. The immunity of susceptibility is therefore inherited in correlation with the dominant properties as well as in connexion with the recessive property.

Complement Fixation Reaction in Tuberculosis.

Augustus Wadsworth, Frank Maltaner and Elizabeth Maltaner (*Journal of Immunology*, January, 1925) describe the details of a study undertaken to ascertain the practical value of the complement fixation reaction in the diagnosis of tuberculosis. Serum for the standardization of the antigens to be used, was first prepared by immunizing horses intravenously with living cultures of tubercle bacilli. Three antigens were prepared from the strains of tubercle bacilli used in the preparation of the immune sera. One consisted of a dialysed aqueous extract diluted 1 to 15; another was a sodium hydrate extract purified and concentrated and diluted 1 to 150 and the third was the broth filtrate purified and concentrated and diluted 1 to 200. Both the culture filtrate and the bacterial residue of glycerine broth cultures of tubercle bacilli were found to possess antigenic properties, these properties being associated with the acetone insoluble lipoids. Details of the technique of the complement fixation test are given and the character of all the constituents used and the relations between antigen, antibody and complement noted. It was found necessary to maintain the hydrogen ion concentration near the neutral point. Variation in complement activity and the quantities of antigen, serum and complement used in the test require accurate determination and adequate control. The specific activity of the serum was found to vary greatly and it may be so feeble as to necessitate titration close to the non-specific limit. In order to test the diagnostic significance of the results obtained with the new method of performing the complement fixation test with antigens of tubercle bacilli the blood serum of calves was tested for a long period before inoculation with virulent bovine bacilli and at intervals during the course of an infection following inoculation. The study of the practical application of the test to the diagnosis of tuberculosis in man was made with two groups of cases. The specific reaction in the great majority of patients suffering with pulmonary tuberculosis was readily demonstrated, but in a few unquestionable instances of active tuberculosis the reaction failed to develope. In many cases the reaction was so slight that only by the most precise titration could it be differentiated from the reactions secured with the serum of non-tuberculous patients. It was therefore considered necessary to employ a serum-complement titration test. Approximately 85% to 95% of serum from patients with pulmonary tuberculosis yielded a reaction, while comparatively few reactions occurred with non-tuberculous serum. The test is to be regarded as of practical value in diagnosis and as experience accumulates will probably be of prognostic significance as well.

Herpetic Strains of the Virus of Epidemic Encephalitis.

Simon Flexner and Harold L. Amos (*The Journal of Experimental Medicine*, February, 1925) report experimental data which lead them to conclude that any distinction between encephalitogenic power as a special property of a virus secured from patients with epidemic encephalitis and of ectotropic action as an equally special property of a virus yielded by febrile herpes is artificial. Until recently it has been the practice to separate the so-called encephalitis virus from the virus of febrile herpes and to regard them in spite of their striking similarities as distinct. Levaditi and his fellow workers consider that the two classes of virus compose a group which they propose to term "hepetico-encephalitic." Within the group they distinguish strains of virus with special affinity for the central nervous system and others exhibiting equal affinity for skin and cornea. The first mentioned are responsible under suitable circumstances for epidemics of encephalitis in man; the others produce attacks of febrile herpes. The authors give details of the examination of a strain (H.F.) recovered from a fresh herpetic vesicle on the lip of a subject prone to attacks of febrile herpes. The fluid was bacteriologically sterile. Rabbits injected with it developed typical symptoms of virus encephalitis to which they succumbed and their brains provided the virus with which a long series of rabbit inoculations has been carried out. Fifteen rabbits received instillation of the "H.F." virus into the cocainized eye, eleven being inoculated with the fresh virus and four with a glycerolated preparation. All developed severe kerato-conjunctivitis succeeded by symptoms of virus encephalitis and succumbed. Thirteen rabbits were inoculated on skin surfaces with fresh virus and eleven developed dermatitis

followed by virus encephalitis and death. This virus therefore does not conform to the classification suggested. It is a true febrile herpes strain and yet it possesses in a high degree the power to attack the central nervous system as well as a definite capacity to implant itself on the skin and cornea of the rabbit. The symptoms provoked and the brain lesions produced are those which are associated with the virus of encephalitis. The authors suggest on the evidence produced that it is possible to distinguish stronger from the weaker strains of the virus which is probably always herpetic in origin. A strong virus is both dermatotropic and neurotropic, a weak one tends to remain confined to the site of inoculation and does not extend to distant parts. This they consider is equally true whether the strain of virus came originally from patients with epidemic encephalitis or from a human being suffering from febrile herpes.

HYGIENE.

The Unhealthy Bargee.

W. F. DEORDEN (*Journal of Industrial Hygiene*, May, 1925) maintains that any review of the relationship between occupation and health must always be made with due consideration to the influence exercised by the home environment of the workers and when any particular industry is under consideration, the probable effect of housing conditions on excessive mortality and morbidity rates must be carefully eliminated before a conclusion is formed in regard to the extent of occupational responsibility. He points out that generally a clear dividing line can be recognized between the two, but that in the case of the bargee or lighterman the occupation and housing of those engaged are inseparable and it is really to this close interlocking that responsibility for certain effects on health must be ascribed. The bargee is compelled to live as well as work on his barge, flat or lighter. His is an open air, muscular occupation and although at times it subjects the bargee to severe weather exposure, such occasions are irregular and rarely prolonged to any excessive extent. So far as the work itself is concerned, therefore, one would undoubtedly expect it to be particularly healthful. The author points out, however, that as an occupation that of bargeman is not at all healthful. The reason for this apparent contradiction must be assigned to the disgraceful insanitary quarters provided. He further shows the comparative mortality figure of the industry to be 1,102 which compares very badly with 790, the figure for all occupied males and with 470, the figure for the open air occupation of farm labourers and 858 for what one might conceive to be the like occupation of fisherman. The excessive liability to fatal accidents is by no means sufficient to explain the high general mortality figure. The bargee is particularly liable to respiratory diseases, especially pneumonia and while his liability to die from pulmonary tuberculosis is not great, there is an excessive liability to death from diseases of the circulatory system. An investigation into the living accommodation provided on this particular class of craft does not leave much doubt as to the real reason for the excessive mortality from respiratory diseases, nor to a considerable extent as to the reason for the greater liability to death from diseases of the circulation. The author lays stress on the unsatisfactory nature of the cabins provided for sleeping and cooking. The ventilation is meagre and provision against the weather is worse, rain water being liable to enter the cabin if the hatchway ventilators are open, while if these are closed there is no ventilation at all. He concludes his article by pointing out the great improvements he has been able to effect through the cooperation of the owners, many of whom recognize that the health and well being of the bargee is of greater importance than the conservation of a few square feet of cargo space.

Control of Health Hazards in Garages and Automobile Repair Shops.

GRACE M. BURNHAM (*The Journal of Industrial Hygiene*, June, 1925) points out that the hours of work bear a direct relation to the accident rate and the hazard of carbon monoxide poisoning. The longer a worker breathes carbon monoxide fumes, the greater the danger. The reduction of working hours is, therefore, an essential factor in protecting the health of automobile mechanics. She points out that very little work has been done in connexion with this class of employment and states that the serious health hazards to which automobile mechanics are exposed, call for the adoption of a national health programme for the protection of workers in garages and repair shops. Such a programme should include control of poisons and other trade hazards, control of accidents, shop sanitation and educational material. This plan of health regulations would serve as a basis for regulations with employers; introduction of regulations, securing to members the benefits of compensations; the provision in every shop of emergency treatment to prevent deaths from carbon monoxide poisoning. For the development of such a scheme the author recommends: (i.) The assembling of first hand evidence showing the actual physical condition of men exposed to trade hazards in garages and repair shops. She points out that no study of this kind has been made, investigations so far dealing mainly with proving the presence of carbon monoxide in the air and in the blood. (ii.) A study of all available information on accidents, cause of death, time lost through sickness, average length of time workers stay in the trade and other related data. (iii.) A study of exhaust gases from various types of gasoline fuels to prove the nature and extent of poisons to which garage workers are exposed. (iv.) An educational campaign in every local union to acquaint the members with the dangers to which they are exposed and with the steps being taken by the union to control these dangers. (v.) The installation in every garage and repair shop of first aid equipment of a scientifically approved type for supplying oxygen mixed with 5% carbon dioxide.

The Social Importance of Healthy Houses.

J. VIOLLET (*The World's Health*, May, 1925) points out that the *Ligue Nationale contre le Taudis* has just issued a report on the slum question in Paris which proves that the slum is a slayer of children, fills the hospitals and increases crime, prostitution and social discontent. The report gives alarming statistics in regard to infant mortality, one instance of sixteen families being cited in which out of one hundred and seventy-three infants born one hundred and forty-four died. As regards contagious diseases the report shows that more than one-third of the deaths took place in one-fifteenth of the houses. The tuberculosis statistics show the same tendency, for whereas in Paris as a whole there were fifty deaths from tuberculosis per 10,000 inhabitants, the average was eighty-one in slum houses. The author points out that these deplorable conditions are being aggravated today in the cheap lodging houses where the working classes tend more and more to congregate. It is shown that many more deaths occur in this type of dwelling than in even the most unhealthy of ordinary houses. Another element which increases the evil, is that almost invariably a bar is attached to these lodging houses and in this way the habit of drinking becomes almost inevitable even amongst the women and children. Thus the moral consequences of such houses are even more serious than their influence on general health. When seven or eight people are huddled together in an attic measuring four metres by two and a half metres (which occurs frequently) it goes without saying that the father has every inducement to spend his evenings at the public house, the mother to become careless and untidy and the children to spend most of their time in the streets, while the danger of promiscuity is a real one. There is, therefore, a crying need for the organization of a campaign against such conditions and in favour of the improvement of working class dwellings. Waging war upon the slum is also waging war upon alcoholism, tuberculosis and immorality. By the establishment of clean and healthy homes, the family is raised to a higher plane and its morality is in a large measure assured.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at the B.M.A. Building, Adelaide Street, Brisbane, on July 3, 1925, DR. VAL MCDOWALL, the President, in the chair.

Motion of Sympathy.

A motion of sympathy with the relatives of the late Dr. H. Lee Garde, of Maryborough, was carried.

Prostatic Enlargement.

DR. A. S. ROE showed a specimen of an enlarged prostate and of enlarged subvesical glands of Albarran.

Papilloma of the Rectum.

DR. C. A. THELANDER showed a papilloma of the rectum which he had removed through a sigmoidoscope by means of an electric snare. The base of the tumour had been cauterized by a diathermy electrode with Dr. Sutton's assistance.

Pulmonary Tuberculosis.

DR. GIFFORD CROLL, C.B.E., showed several X ray films taken from a patient suffering from pulmonary tuberculosis with the lesion in the right apex. In the first picture taken a few months previously a moderately large cavity was seen with extensive area of tuberculous infiltration. After one month of rest and a few months of fresh air in the climate of western Queensland no cough had been present and no sputum and the patient had felt quite well. A second picture taken early in June, 1925, revealed only a small cavity and a small area of fibrosis. Dr. Croll said that this evidenced the natural processes of recovery. He thought that if other methods had been used the result might have been attributed to them.

Common Sense.

DR. EUSTACE RUSSELL read a paper entitled: "Common Sense" (see page 273).

A discussion took place in which the following joined: Dr. A. Stewart, Dr. A. Jefferis Turner, Dr. C. A. Thelander, Dr. Gifford Croll, Dr. B. L. W. Clarke, Dr. J. Lockhart Gibson.

A MEETING OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held at Royal Hospital for Women, Paddington, Sydney, on July 9, 1925, DR. R. B. WADE, the President, in the chair.

Antepartum Hæmorrhage.

PROFESSOR J. C. WINDEYER said that he had been asked to open a discussion on the treatment of *antepartum* hæmorrhage and that as the time was limited he did not propose to present a complete paper on the subject. His remarks would be sketchy in nature and he would lay emphasis on only one or two points. It was his wish that not only those who were connected with obstetric hospitals, but also those who were in general practice, would relate their experiences more especially in regard to the less severe grades of the condition under discussion.

In regard to *placenta prævia* Professor Windeyer said that when any hæmorrhage occurred during the later months of pregnancy *placenta prævia* should be suspected. The medical attendant should immediately palpate the abdomen and then make a vaginal examination for evidence of an abnormal implantation of the placenta. Early recognition of the presence of a *placenta prævia* before the patient had become exsanguinated by a large or repeated hæmorrhage had a most important bearing on the prognosis. When the patient suffered from hæmorrhage during the later months of pregnancy and a *placenta prævia* had been diagnosed, it was the rule to terminate the pregnancy. Departures should be made from this rule only under very exceptional circumstances. Such exceptional conditions might be the presence of slight hæmorrhage, a slight degree of *placenta prævia*, the presence of a living fœtus which was just below the age of viability, and possibly the fact that the patient was at rest and in a hospital, where immediate treatment could be instituted, if necessary, on account of further hæmorrhage.

The treatment of *placenta prævia* might be summarized as follows. First of all the hæmorrhage should be controlled and secondly uterine contraction and retraction should be promoted. If the patient were not in labour or if labour had only just commenced, the most effective method of carrying out these objects was to plug the vagina. Professor Windeyer said that as so many faulty attempts at plugging the vagina were seen in patients sent into hospital, he thought he might be pardoned for describing the details of this procedure. In the first place he called attention to the term plugging the vagina. He always used the word plug rather than the word pack, as it gave a better indication of what should be attempted in performing this operation. The material used should be one that was solid and inelastic. Boiled pledgets of cotton wool which were squeezed dry before insertion, answered the purpose excellently. On insertion the pledgets of wool should be first applied where pressure was required, namely under the area of placental separation. For this reason a ring of pledgets should be built up round the cervix. Then more pieces of cotton wool should be inserted outside this ring until the fornices were filled up as widely as possible. This should be done before any attempt was made to plug the lower parts of the vagina. The whole plug should be made as solid as possible by insinuating pledgets in between those already in position wherever possible. A perineal bandage over the plug and a tight abdominal binder completed the operation. Professor Windeyer pointed out that he had omitted the so-called packing of the cervix with gauze. He held that the cervical canal should not be interfered with for three reasons. In the first place if anything were pushed through the cervical canal further separation of the placenta was liable to occur. Secondly, the gauze on insertion would not come in contact with the bleeding area which was situated around or at one side of the internal *os*. Thirdly, gauze pushed through the cervix was very apt to carry infection into the uterus. Rather than packing the cervix he preferred to place a large pledget of cotton wool over the cervix while plugging downwards from the vault to the vagina. Plugging usually stimulated uterine action and an efficient plug might sometimes be left in till the onset of pains characteristic of the second stage of labour or until pushing down of the plug indicated that the cervix was fully dilated. He had noticed that plugging was ineffective in cases in which the vaginal vault was narrow and in which a broader top to the plug could not be obtained. In such cases as this recurrent hæmorrhage was apt to occur and this would necessitate the use of other methods for controlling the hæmorrhage, namely, version with one leg brought down through the cervix or the insertion of a de Ribes bag.

The Glasgow and Rotunda teachers emphasized an important point in regard to version which seemed to be well worthy of mention. It was stated instead of performing a bipolar version in which two fingers working in the lower uterine segment might cause further detachment of the placenta, external version should first of all be performed in order to bring the breech down over the cervix. The membranes could then be ruptured and a foot brought down. This method should certainly serve to make the blood loss less. After controlling hæmorrhage by these means the medical attendant should remember that rapid extraction of the fœtus was to be avoided. Cæsarean section had a wider scope than formerly in the treatment of *placenta prævia*. It greatly diminished the excessive fœtal mortality and in the absence of sepsis with a viable child and a centrally placed placenta, it was the operation of election. It remained to be seen whether the maternal mortality would be diminished, if these indications were broadened.

If any hæmorrhage occurred after the expulsion of a child in a case of *placenta prævia*, the placenta should be

expressed or removed manually at once. When the patient was exsanguinated the removal of the placenta should be followed by bimanual compression of the whole anteflexed uterus over a period of five minutes. While this was being done the cervix should lie in the hollow of the hand in the vagina, pressure should be gradually relaxed and the vaginal hand should not be removed for a couple of minutes so that parts would not be disturbed. Professor Windeyer pointed out that some of the details of technique which he had mentioned, might seem of little importance, but he assured his audience that in obstetrics it was the little things that counted.

In discussing the treatment of accidental hæmorrhage Professor Windeyer pointed out that it differed from *placenta prævia* in several ways. In the first place the area from which the hæmorrhage was occurring, was so situated that direct pressure could not be applied to it as could be done in *placenta prævia*. In the second place if the blood loss was slight, it was possible to temporize in accidental hæmorrhage more than in *placenta prævia*. Thirdly, in the more severe types of accidental hæmorrhage the condition was not simply one of separation of the placenta, but the uterine musculature was wholly or in part infiltrated with blood and this infiltration interfered with the contractile power of the organ. It would thus be seen that in treatment they might be confronted with cases of varying degrees of severity. The patient suffering from slight hæmorrhage might require merely rest and possibly an opiate. The more severe forms of accidental hæmorrhage occurring before or early in labour should be treated by plugging the vagina firmly, for plugging tended to promote uterine contraction and caused clotting of the pent up blood within the uterus. Bipolar version followed by the bringing down of one leg or the insertion of a de Ribes bag were operations not indicated so frequently in accidental hæmorrhage as in *placenta prævia*. In the latter condition they were used to allow the application of pressure to the bleeding area. In accidental hæmorrhage they were used as a form of *accouchement forcé* which tended to produce shock and must if possible be avoided. In the most severe types of accidental hæmorrhage which were usually accompanied by severe shock, tenseness and tenderness of the uterus with or without much external bleeding, the condition was one of utero-placental apoplexy. Patients suffering from this form of accidental hæmorrhage usually gave evidence of toxæmic symptoms and if uterine contraction did not occur early, Cæsarean section offered the best chance to the mother. After the removal of the child if the uterus showed no signs of contraction and retraction, supravaginal amputation should be performed.

Professor Windeyer said in conclusion that he wished to emphasize the point that all patients with *antepartum* hæmorrhage should be, if possible, under treatment in a hospital where more assistance and a more complete aseptic technique were available than in a private house.

Dr. Ralph Worrall said that he had no criticism to offer in regard to Professor Windeyer's remarks. All that he had said was in accordance with modern teaching on the subject. One or two things, however, had been omitted to which Dr. Worrall thought reference should be made. Professor Windeyer had not told them how to plug the vagina. This operation frequently had to be carried out when everything was not in readiness. It would be found that an efficient way was to place the patient on her left side in the semiprone position. The operator's left hand could be inserted into the vaginal entrance with the palm towards the anus and it could in this way be used as an improvized speculum. It was held at Rotunda that in plugging the vagina the plugs should be placed external to the uterine artery, but this could only be done if the fornices were pushed well upward. He preferred to use a weak antiseptic solution with the plugs in order to prevent decomposition of the discharges which they absorbed. Dr. Worrall said that in his student days he had been taught by McCann never to plug in the presence of accidental hæmorrhage, but always to do so in *placenta prævia*. At Rotunda Hospital plugging was used in both conditions. Jellett stated that no reliance should be placed on plugs if the membranes had ruptured, but Tweedy in 1907 had advocated plugging even if rupture of membranes had occurred.

Dr. E. Ludowici said that he wished to thank the staff of the hospital for the very excellent papers which had been read and exhibits which had been shown that afternoon. He intended to make some supplementary remarks only. The diagnosis of a centrally placed *placenta prævia* was easy. If the condition was a lateral or marginal one, it was not so easy. These conditions might reasonably be suspected in the case of a vertex presentation if the head could not enter the pelvis once labour had started. If the patient had previously experienced a normal labour it was reasonable to presume that something was blocking the canal and the *placenta prævia* was most likely to do this. In regard to treatment he wished to emphasize that all the plugging in the world was no good without a properly applied abdominal binder.

In regard to Cæsarean section for *antepartum* hæmorrhage it was not always easy to come to a decision. One of the indications was a living child. Dr. Ludowici referred to a patient at full time who had been bleeding for a week. The fœtal movements had been slight according to the patient's statement, the fœtal heart sounds inaudible and there had been no tendency for the head to engage. It had been difficult to decide whether Cæsarean section should be carried out or whether conservative measures should be adopted. Finally he had adopted the former procedure and this had been justified by the birth of a living child. At operation he had found that the placenta was placed anteriorly and in the lower uterine segment. This had accounted for the inaudibility of the fœtal heart sounds and for the inability of the head to fix. It was usually stated that the cause of accidental hæmorrhage was disease of the patient or of the uterine wall. This was not always so. A patient who had previously undergone normal labour had on coming into labour experienced bleeding with each uterine contraction. Dr. Ludowici had performed Cæsarean section and had found that the cord was short and was twisted several times round the child's neck. The cause of the hæmorrhage had been apparent for with each uterine contraction traction had been exerted on the placenta by the cord and this had occasioned slight detachment and the hæmorrhage.

Dr. H. B. Oxenham said that he had seen seven patients suffering from *placenta prævia*. The first case had occurred on the first day of his duty as external assistant at the Coombe Hospital, Dublin. He had found a patient fainting and the bed full of blood, but the bleeding had stopped. The fœtal heart sounds numbered 140 in the minute. He had reported the patient's condition to the hospital authorities and had been told to do nothing. A fast second stage had occurred and the child had been born dead with the placenta on its head. He thought that his inactivity had been the cause of the child's death and if forceps had been applied it would probably have been born alive. In the other six cases two non-viable children had been born dead and four alive. In none of these cases had interference been necessary beyond forceps delivery immediately the uterus was fully dilated, as the head itself had controlled the hæmorrhage. The forceps had to be applied carefully so that the placenta might not be disturbed. He had had no maternal mortality. He held that forceps should be used in the second stage in head presentations with a living child. If the child was not extracted quickly it might be lost, even if the head was controlling the hæmorrhage by pushing the placenta before it. He asked Professor Windeyer what he would do in these circumstances.

Dr. T. W. Lipscombe asked Professor Windeyer whether he advised plugging in all cases of *placenta prævia*.

Professor Windeyer in reply said that he had merely opened the discussion and had not attempted to say everything.

In reply to Dr. Worrall he said that he had merely wished to emphasize the importance of a solid plug and a formation of a ring round the cervix.

In reply to Dr. Ludowici he said that the plug was the most important point and that the binder, though useful, was not so essential.

Dr. Oxenham had been fortunate in his cases and in the good results which he had experienced. In all his

cases vertex presentations had been present and the head had come down into the cervical canal. In regard to the application of forceps he said that Dr. Oxenham had been wise in that he had not applied them before the *os* was fully dilated. The danger occurred in pulling the head through the cervix which was not fully dilated.

In reply to Dr. Lipscomb Professor Windeyer said that he would not advise plugging in all cases of *placenta prævia*. When the patient was in labour and the head was compressing the bleeding point there was no need to plug. Plugging was of use in practically all early cases.

Pregnancy at Full Term in Rudimentary Horn of the Uterus.

Dr. Constance E. D'Arcy read the report of a case of pregnancy at full term in a rudimentary horn of the uterus. (This will be published in a subsequent issue.)

Dr. Ralph Worrall said that he was very interested in Dr. D'Arcy's report. He had published the histories of several cases of advanced extrauterine gestation of over six months' duration. In one the duration had been six months past full term. All the patients had recovered. In no instance had the placenta been removed. He had attended the second of these two patients in her second confinement and she had informed him that at each menstrual period a certain amount of oozing took place from the sinus which had resulted from her previous operation.

Dr. F. C. B. Hittman said that he had had experience with a full term abdominal pregnancy at Rotunda Hospital. The patient had suffered from pain and slight hæmorrhages in the early stages of pregnancy. Later on a spurious labour had occurred at term. The patient had been attended by students in "the district." After labour had ceased the students had returned to the institution. After a period of two weeks the patient had complained of an offensive vaginal discharge and had been admitted to hospital. Her condition had been diagnosed as being due to a dead fœtus in a normal uterine pregnancy at term. At this time the students had presented themselves for final examination and many of them in company with the staff of the hospital had made a wrong diagnosis. When a member of the staff had tried to induce labour he had not been able to insert a bougie. The pregnancy had been extrauterine.

Ruptured Appendix in a Woman Eight Months Pregnant.

Dr. P. L. Hipsley read the clinical history of a woman who suffered from a ruptured gangrenous appendix at the eighth month of pregnancy. This report will be published in another issue.

Cæsarean Section on Account of Imperforate Anus and Recto-Vaginal Fistula.

Dr. Hipsley also reported a case of Cæsarean section which he had undertaken on account of imperforate anus and a recto-vaginal fistula. This report will be published at a later date.

Hydatidiform Mole.

Dr. Hipsley also reported the clinical history of a woman, aged thirty years, who had been admitted to hospital on June 12, 1925. She had complained of irregular bleeding for about three months with the passage of what she supposed to be a fœtus six weeks previously. Twelve hours before admission she had complained of pain in the back. The patient had undergone abdominal section seven years previously in another hospital on account of tubo-ovarian abscess. She had undergone ten operations on the right hip within a period of two years due to accident when she was two and a half years old. She had been married for the first time ten years previously and had had no children. She had suffered from two miscarriages. Each had occurred when she was three months pregnant and the last miscarriage had occurred three months previously. She had been married for a second time four months before admission. Menstruation was normal and the date of her last menstrual period was March 5, 1925.

On examination after admission a mass had been found in the abdomen in the middle line extending ten centimetres (four inches) above the *symphysis pubis*. On vaginal examination it had been found that the cervix pointed downwards and backwards, that the *os uteri* was slightly patulous and that the uterus was the size of a four and a half months pregnancy. A provisional diagnosis of hydatidiform mole and *placenta prævia* had been made. On June 15, 1925, the uterus had increased somewhat in size and no further bleeding had taken place. On June 25, 1925, a moderate amount of dark red blood had been passed. On vaginal examination the uterus had appeared the size of a six months pregnancy and the *os uteri* was closed. Continuous dark red oozing had followed the examination. The vagina had been packed with gauze. On June 26, 1925, induction of labour had been undertaken, three tents and a piece of gauze had been inserted into the cervix. Later on more gauze had been introduced into the vagina. Quinine sulphate had been ordered in doses of 0.6 gramme (ten grains) for six hours for three days and thirty cubic centimetres (one fluid ounce) of castor oil had been given with the second dose of quinine. On June 27, 1925, the tents and the gauze had been removed and the *os uteri* had admitted two fingers. In the afternoon of that day a small de Ribes bag had been introduced and later on this was expelled. The hydatidiform mole had been expressed by abdominal pressure and digital curettage of the uterus had been combined with the use of a blunt flushing curette. The puerperium had been normal. (Dr. Hipsley demonstrated the specimen.)

Congenital Dislocation of Both Hips: Cæsarean Section.

Dr. H. A. Ridler showed a patient, aged twenty years, who suffered from double congenital dislocation of the hip joints. The great trochanters were 3.75 centimetres (one and a half inches) above interspinous planes. A false joint had formed on the dorsum of the iliac bones. On admission of the patient to hospital the abdomen had been the size of a full time pregnancy. No attempt had been made on the part of the fœtal head to enter the pelvis and considerable disproportion had been present. The patient had been in labour and contractions of moderate severity had occurred. Cæsarean section had been performed together with double partial salpingectomy. A living male child had weighed five kilograms (eleven pounds two ounces). After operation the patient's pulse rate had been rapid (160 in the minute) and the temperature had been 38.9° C. (102° F.). The general condition had been moderately good and the abdomen distended. The patient had subsequently been treated by uterine douching on account of a purulent discharge. Some suppuration had occurred in the lower third of the abdominal wall. On June 27, 1925, the temperature had become normal and had remained so.

On June 28, 1925, a swelling had appeared on the right buttock of the child. This had been incised on the following day and large quantities of pus had escaped. The diagnosis of suppurative epiphysitis due to some metastatic infection had been made and the child had been transferred to the Royal Alexandra Hospital for Children. On July 5, 1925, the child had been reported as well and no further abscess had occurred.

Multiple Fibro-Myomata and Degeneration of Fibroid During the Puerperium.

Dr. Ridler also showed a patient, aged thirty-six years, who had been admitted to hospital on July 5, 1925. The patient had attended hospital when six months pregnant and multiple fibro-myomata had been found. No fibroids had been found in the pelvis and the patient had been advised that the pregnancy should continue to term. The patient had had no children, but had suffered from one miscarriage six years previously. Menstruation had been normal and the last menstrual period had occurred in either September or October, 1924.

On June 16, 1925, the patient had been admitted in labour with the fœtus lying in the right occipito-anterior position. The head had been fixed in the pelvis and the fœtal heart sounds were normal and the following day the patient had been delivered naturally of a living male child.

No hæmorrhage followed completion of the third stage. On June 18, 1925, the temperature had risen to 39.4° C. (103° F.) and the pulse rate had been 116 in the minute. The lochia had been normal and no tenderness of the fibroids had been found. Abdominal distension had been relieved by an enema. On July 19, 1925, the temperature had still been raised and the pulse rate 110 in the minute, the lochia had been offensive. A general anæsthetic had been given and the interior of the uterus explored with the hand. Numerous large intramural fibroids had been discovered, some larger and some smaller than the size of a cricket ball. The uterus had been curetted and small pieces of placenta removed. On June 21, 1925, the lochia had still been heavy and profuse. An intrauterine douche had been given. On June 24, 1925, the patient had had a rigor and the lochia had been offensive. On June 26, 1925, the lochia had been more profuse than on any previous occasion and still heavy; another intrauterine douche had been given. On July 1, 1925, the patient's general condition had improved. The tongue became clean and moist. The lochia had become non-offensive, but was still very profuse. Good drainage had been obtained by propping the patient well up in bed. This had also been done early in the puerperium. By July 6, 1925, the lochia had become yellow.

Albuminuria of Pregnancy.

Dr. F. Brown Craig showed a female patient, aged thirty-five years, who had been admitted to hospital on July 3, 1925. On admission the patient had complained of cough in the morning of a month's duration, of hæmoptysis after twelve hours' coughing on the day prior to admission, of vomiting which had been present all through pregnancy and which had become more severe, together with epigastric pain, three nights before admission, of slight œdema of the feet which had been present for two months and which had become more pronounced two days before admission and of pain in the back and lower part of the abdomen. The patient had not suffered from headache or from any visual disturbance. It had been found on examination that the uterus was the size of a full term pregnancy, that the fœtal heart sounds numbered 130, that the patient's systolic blood pressure was 160 millimetres of mercury, that the second aortic sound of her heart was accentuated and that slight dulness was present at the base of both lungs. The breath sounds at both bases had been vesicular in character and had been accompanied by numerous coarse crepitations. Prior to admission the patient had been passing large quantities of urine and the quantity of albumin had been estimated as "one twelfth." At the time of admission the uterus had been manifesting strong contractions at ten o'clock p.m.. On the day of admission the quantity of albumin in the urine had been estimated at "one quarter" and the systolic blood presssure had been 140 millimetres of mercury. On July 4, 1925, the membranes had been ruptured when dilatation was "three quarters." The patient had been exhausted, her colour had been bad and she had sweated freely. She had been delivered by instruments of a living female child. On the following day the urine had been acid and had contained no albumin.

Dr. Brown Craig's second patient, aged twenty-five years, had been admitted to hospital on July 1, 1925. She had complained of swelling of the face and legs of three weeks' duration and of continuous pain of a dragging nature in the lower part of the abdomen at the same time. The patient's menstrual history had been normal and her last menstrual period had occurred on September 12, 1925. She had been married for one year, had had no children and no miscarriages. She had had no previous illnesses. The action of her bowels had been regular and for six weeks she had complained of frequency of micturition. It had been found on examination that the temperature was normal, that the pulse rate was 146 in the minute and that the systolic blood pressure was 190 millimetres of mercury. It had also been found that the urine was acid and contained "one half" albumin, that the second cardiac sound was accentuated, that considerable swelling of the face and legs was present and that the uterus was enlarged to the size of an eight months pregnancy. The fœtal heart sounds had numbered 130 in the minute and the vertex had presented. Treatment had consisted of purgatives, diuretics, body packs and milk diet.

On July 2, 1925, induction of labour had been undertaken by the means of bougies and quinine sulphate. The following day the patient had complained of severe frontal headache, dizziness, blurred vision and abdominal pain. Two hypodermic injections of veratrone had been administered and this had resulted in the fall of the blood pressure. Labour had finally terminated on the morning of July 5, 1925, by the birth of a living male child. At this time the patient had passed urine in which the albumin had been estimated as "four fifths." On July 6, 1925, the patient had felt much better and the quantity of albumin in the urine had been "one fifth."

Eclampsia.

The third patient shown by Dr. Brown Craig was fifty years of age and had been admitted to hospital on June 23, 1925. At this time she had complained of scanty micturition, giddiness, shortness of breath, œdema of both feet, sleeplessness and slight cough. These symptoms had all been present for one week. On examination slight puffiness of the face had been found together with considerable œdema of the feet, legs and abdominal wall. The second cardiac sound had been accentuated at all areas and the systolic blood pressure had been 210 millimetres of mercury. On examination of the lungs a few coarse crepitations had been heard at the right base. On examination of the urine "slight albumin" had been found. The uterus had been the size of a six months pregnancy and the fœtal heart sounds had numbered 130 in the minute. Treatment had consisted of purgatives, diuretics, hot packs and starvation for twenty-four hours. On June 25, 1925, the patient had passed two hundred and forty cubic centimetres (eight ounces) of urine and the albumin had been "one-third." On June 28, 1925, the patient had complained of severe headache and blurred vision and had suffered from a series of ten eclamptic convulsions. On June 29, 1925, a de Ribes bag had been introduced, two more convulsions had occurred and the patient had been delivered with forceps of a living child after the expulsion of the de Ribes bag. Further convulsions had occurred two and a half hours after the birth of the child. On June 30, 1925, the quantity of urine passed had been five hundred and forty cubic centimetres (eighteen ounces), it had contained "solid albumin" and the patient had been comatose. On the following day the patient had improved somewhat. She had been comatose at times The quantity of urine had been eight hundred and forty cubic centimetres and it had contained "one third" albumin. The systolic blood pressure had been 130 millimetres of mercury. Puffiness of the face had decreased. No œdema of the feet had been present, but vision had been blurred. From this onwards the patient had got better and at the time of demonstration her sight was improving.

Arrested Breech Delivery.

Dr. G. B. Lowe showed a patient, aged twenty-three years, who had gone into labour on June 20, 1925, in her second pregnancy. A breech presentation had been found and progress had been arrested by both knees of the fœtus being caught behind the *symphysis pubis*. Under chloroform anæsthesia the knees had been freed and one leg pulled down, the arms had been fully extended above the head and the head had been removed by the Smelie-Viet grip. The puerperium had been normal and the patient had been discharged on the tenth day.

Mitral Stenosis and Pregnancy.

Dr. E. W. Fairfax showed a patient aged twenty-nine years who had been admitted to hospital on June 30, 1925. At the time of admission the patient had complained of nocturnal cough and vomiting of seven days' duration, of slight precordial pain and of dyspnœa, also of seven days' duration, and of blood stained sputum which had appeared twenty-four hours before admission. Inquiry into the previous history revealed that five years previously she had suffered from mastoiditis, toxæmia and pan-

ophthalmitis. The patient had been married for eleven years, she had three children, the eldest was ten years and the youngest five years of age. The patient had been very dyspnœic. Cough and blood stained sputum had been present. The patient had complained of sleeplessness. She had not suffered from œdema of the feet. On examination it had been discovered that the heart was slightly enlarged, that mitral stenosis was present and that coarse crepitations were audible at the bases of both lungs. The abdomen had been the size of an eight and a half months' pregnancy. The fœtus was in the right occipito-posterior position. The fœtal heart sounds had numbered 140 in the minute. By July 3, 1925, considerable improvement had taken place, the patient was sleeping well and had no cough or sputum. Pregnancy was to continue to term.

Pneumonia and Myocarditis in the Puerperium.

Dr. Fairfax's second patient was aged twenty-nine years, she had been admitted to hospital on June 8, 1925. Her temperature had been 38.5° C. (101° F.), the pulse rate had been 134 and the respirations had numbered 32 in the minute. A normal confinement had taken place on May 29, 1925. On June 2, 1925, diarrhœa had commenced and at the time of admission was still troublesome. On June 5, 1925, the patient had had a rigor, the following day she had complained of pain in the right side of the chest, of cough and of dyspnœa. On examination after admission it had been found that the uterus was of a normal size, that the lochial discharge was pale and that signs of a right sided basal lobar pneumonia were present. Subsequently pneumonia had occurred at both bases and on June 16, 1925, signs of thickened pleura had been found at the right base with slightly resolving pneumonia at both bases. On June 18, 1925, the chest had been explored for fluid without result. On June 27, 1925, the temperature had been remittent. The chest had been explored, but no fluid had been found. Thickened pleura had still been present at the right base. On July 2, 1925, the patient had become more dyspnœic. The temperature was intermittent and crepitations had been heard at both bases. In the heart a tick-tack rhythm had been audible. Tenderness of the liver had been found and the urine had contained a faint cloud of albumin. Œdema of both feet had also been present. At the time of demonstration the patient's condition was unaltered.

Pulmonary Tuberculosis in the Early Months of Pregnancy.

Dr. Fairfax also showed a patient, aged twenty-seven years, who had been admitted to hospital on June 28, 1925, on account of vaginal bleeding of seven days' duration. The patient had been vomiting for two months and had suffered from hæmotysis twenty-four hours before. On inquiry it was found that she had been suffering from pulmonary tuberculosis in the left upper lobe for four years. She had had one child seven years previously and had had three miscarriages. The first had taken place six years and the last fifteen months previously. On each occasion she had been six weeks pregnant. The menstrual history was normal and the last menstrual period had occurred on April 24, 1925. On examination signs of tuberculosis of the left upper lobe had been found. A miscarriage had subsequently occurred and the uterus had been curetted.

Pathological Specimens.

Professor J. C. Windeyer showed some interesting pathological specimens.

The first specimen consisted of a uterus and placenta that had been the site of utero-placental apoplexy. The uterine wall was the seat of extensive infiltration by blood and slight laceration of the peritoneal coat had occurred as a result of the general distension of the uterus.

A placenta was also shown with a large retroplacental clot. This had been taken from a patient who suffered from accidental hæmorrhage and from severe toxæmic symptoms.

Another placenta had been taken from a patient who suffered from accidental hæmorrhage and from eclampsia which occurred twenty hours later. It was pointed out that two-thirds of the placenta had been thrown out of action by infarction or retroplacental clotting. The infant had been stillborn.

In yet another placenta from an eclamptic patient less than one-third of the placenta had been thrown out of action by infarction. The infant had lived.

A normal placenta with very small infarcts was shown for purposes of comparison with the two preceding specimens.

A fibroid weighing 1.8 kilograms (four pounds) had been removed by myomectomy from the anterior wall of the uterus at the twentieth week of gestation. The patient had been confined normally at term.

NOMINATIONS AND ELECTIONS.

The undermentioned has been nominated for election as a member of the New South Wales Branch of the British Medical Association:

Andrew, Philip Oswald, M.R.C.S., 1896 (England), L.R.C.P., 1896 (London), Tuncurry.

The undermentioned have been elected members of the New South Wales Branch of the British Medical Association:

Anderson, Phyllis Margery, M.B., Ch.M., 1925 (Univ. Sydney), 16, Croydon Street, Petersham.

Cuthbert, Grace Johnston, M.B., Ch.M., 1924 (Univ. Sydney), Royal North Shore Hospital, St. Leonards.

Kristenson, Ronald Justice Carlisle, M.B., Ch.M., 1924 (Univ. Sydney), 9, Constitution Road, Dulwich Hill.

Sandes, Stephen Graham, M.B., Ch.M., 1925 (Univ. Sydney), c.o. H. F. Ray, Esquire, Grosvenor Road, Lindfield.

Stephen, Bruce Alexander, M.B., Ch.M., 1923 (Univ. Sydney), Cronulla.

Wooster, Gordon Bruce Roy, M.B., Ch.M., 1924 (Univ. Sydney), Mental Hospital, Gladesville.

The undermentioned has been elected a member of the Victorian Branch of the British Medical Association:

Keane, Allan Coleman, M.B., B.S., 1925 (Univ. Melbourne), Sydney Road, Kilmore.

THE AUSTRALASIAN MEDICAL PUBLISHING COMPANY, LIMITED.

Annual Meeting.

The Annual General Meeting of the Australasian Medical Publishing Company, Limited, was held on August 25, 1925, at The Printing House, Seamer Street, Glebe, Sydney, Professor F. P. Sandes, in the absence of the Chairman, Dr. W. N. Robertson, in the chair.

The following report of the Directors was presented and adopted:

> The Directors submit their report for the past year and the balance sheet as at June 30, 1925, together with the profit and loss account for the twelve months ended June 30, 1925. The Company's printing house at Seamer Street, Glebe, Sydney, the foundation stone of which was laid on July 16, 1924, was completed early in February last in accordance with the plans drawn by Messrs. Vernon and Mills, Architects, of Sydney. The machinery and plant having been thereupon installed, the editorial staff and printing and

publishing and business staffs took possession of their new quarters. The selection of the machinery and general equipment was in the hands of Dr. H. W. Armit with the advice of Professor F. P. Sandes, the Director in Sydney. They are to be congratulated on the admirable result of their work and deserve the heartiest thanks of the members of the Company.

The first number of THE MEDICAL JOURNAL OF AUSTRALIA to be produced in the Company's own printing house was that of March 21, 1925.

The main business of the Company has continued to be the production of THE MEDICAL JOURNAL OF AUSTRALIA as heretofore; but the business of general printers has been entered upon and will be developed to the fullest extent possible.

The response of the Branches of the British Medical Association and of the individual members of the profession to the invitation of the management to avail themselves of the services of The Printing House for their printing and stationery, has been encouraging.

It is anticipated that, in due course, the printing machines will be running to their full capacity and that the undertaking which has been entered upon with so much promise, will not only be successful financially, but will advance the cause of medical science in Australia.

Dr. W. Kent Hughes and Professor F. P. Sandes retire from the Board of Directors in accordance with the requirements of the Articles of Association and are eligible and offer themselves for reelection.

For the financial position of the Company, the members are referred to the balance sheet and profit and loss account.

(Signed) F. P. SANDES,
Chairman.

August 25, 1925.

Dr. W. Kent Hughes and Professor F. P. Sandes were reelected Directors of the Company.

Correspondence.

CHRONIC ABSCESSES.

SIR: Everyone must appreciate the latest instalment of good things from the teachers at the University of Toronto.

Professor Starr has come to the conclusion after a long experience, that: "The mortality from the pure tuberculous infection is mostly from invasion of other tissues, usually the central nervous system or kidneys, whereas the sufferers from mixed infections die of amyloid disease of the abdominal viscera or from exhaustion from long continued suppuration." He further states: "In most textbooks at the present time very scant instructions are given as to the method of caring for tuberculous abscesses and the dangers of mixed infections are nowhere emphasized sufficiently. The method of dealing with septic abscesses, on the other hand, is adequately stressed and the average young practitioner makes the mistake of treating both alike, with very serious detriment to the tuberculous patient."

The professor then discusses various ways of treating chronic abscess, including the expectant method, aspiration, aspiration and injection of antiseptics, incision and finally incision with closure of the wound. The last has his preference.

He stresses the importance of making a large incision through healthy tissues in the least dependent area. The cavity is mopped out with 2.5% solution of iodine before closure. A "heavy pad or dressing is applied with an elastic flannel bandage," but no mention is made of the nature of that dressing. I presume it is an aseptic one.

It is always interesting to compare practice of today with that of bygone and apparently forgotten times.

In the early 'sixties of last century, one Joseph Lister was moved not to despair, but to desperation by the pitiful aspects of cases of chronic abscess in his wards. The expectant method was the only hope, for then the infection remained uncontaminated. If opened or if it ruptured spontaneously, Lister observed exactly the same phenomena as Professor Starr describes.

In 1866, in the month of October to be exact, Lister began to open these abscesses beneath a square of lint soaked in carbolic oil. He taught then that it was not necessary to make the opening in the most dependent place; a free opening was not necessary; that no harm would come from squeezing an abscess . . . for the pyogenic membrane was only made of granulation tissue and was not, as some thought, a gland for secreting pus; there was no need to treat the interior with carbolic acid because there was nothing to destroy. He was so satisfied with this technique that he wrote to his father about it, saying: "The course run by cases of abscess treated in this way is so beautifully in harmony with the theory of the whole subject of suppuration, and besides the treatment is now rendered so simple and easy for anyone to put in practice, that it really charms me."

There is no doubt that Professor Starr's own technique is nearly as good as that of Joseph Lister (1866) and it is to be hoped that some day he will simplify his method by incorporating the essential part of Listerism that is necessary to make it complete.

I can strongly recommend the "average young practitioner" to peruse "The Collected Papers" of the late Joseph Lister, there is really some good stuff in them that has been forgotten and left out, as the professor says, from modern textbooks.

Yours, etc.,

A. C. F. HALFORD.

Brisbane,
August 22, 1925.

Proceedings of the Australian Medical Boards.

VICTORIA.

THE undermentioned have been registered, under the provisions of *The Medical Act*, 1915, as duly qualified medical practitioners:

Courtney, Geoffrey Charles Palliser, M.B., B.S., 1925 (Univ. Melbourne), "Worreen," Wagner Street, Malvern.

Keane, Allan Coleman, M.B., B.S., 1925 (Univ. Melbourne), Sydney Road, Kilmore.

Maunder, Harold Arthur, M.B., B.S., 1925 (Univ. Melbourne), Melbourne Hospital, Melbourne.

Ward, William Herbert, M.B., Ch.M., 1920 (Univ. Sydney), 165, Power Street, Hawthorn.

Homewood, Arthur Norman, M.B., Ch.B., 1915 (Univ. Edinburgh), Hawthorn Road and Woollcott Avenue, Caulfield.

Obituary.

LESLIE BEST.

WE regret to announce the death of Dr. Leslie Best, which occurred at Sydney Hospital on August 27, 1925.

Leslie Best graduated at the University of Sydney in 1921 as bachelor of medicine and master of surgery. He was an enthusiastic cricket player and captained the Sydney University cricket team. He had been engaged in general practice in Redfern for two years.

Medical Prizes.

PRIZE ESSAY ON MATERNAL AND INFANTILE MORTALITY AND MORBIDITY.

THE Melbourne Permanent Committee for Post Graduate Work informs us that under the terms governing the competition of the prize essay on maternal and infantile mortality and morbidity, the Committee undertook not

to divulge the names of the authors of essays other than the winning essay. The unsuccessful competitors were informed that their essays would be returned on receipt by the Honorary Secretaries of a request for their return. In these circumstances the Committee regards itself as debarred from ascertaining the authorship of the other essays entitled: "Forewarned is Forearmed," "The Old Order Changeth, Giving Place to the New" and "*Spero Meliora*." It hopes, however, that these essays and points from others may be available to it for use in any way deemed suitable, such as publication and selections of portions to be employed for propaganda in maternity and infantile work either by the Committee or by the ordinary State Health Departments.

In order to proceed with this work the Committee is anxious to receive the consent of the essayists and invites them to communicate with the Honorary Secretaries, Dr. J. W. Dunbar Hooper and Dr. Harold R. Dew.

Births, Marriages and Deaths.

THE charge for inserting advertisements of Births, Marriages and Deaths is 5s., which sum should be forwarded in money orders or stamps with the notice, not later than the first post on Monday, in order to insure insertion in the current issue.

DEATH.

HUTCHINSON.—On August 10, 1925, at his residence, Aylestone, 49, Pleasant Road, Upper Hawthorn, Victoria, Frederick Ernest Hutchinson, M.R.C.S. (England), L.R.C.P. (London).

Books Received.

MODERN TECHNIQUE IN TREATMENT: Volume I. Published by *The Lancet*, London. 1925. Sydney: Angus & Robertson, Limited. Demy 8vo., pp. 376. Price: 12s. 6d. net.

THE ILLUSTRATED AUSTRALIAN ENCYCLOPÆDIA: Edited by Arthur Wilberforce Jose and Herbert James Carter. Volume I. A to Lys. 1925. Sydney: Angus & Robertson Limited. Crown 4to., pp. 768.

THE ICONOGRAPHY OF ANDREAS VESALIUS, by M. H. Spielmann, F.S.A.; 1925. London: John Bale, Sons & Danielsson, Limited. Crown 4to., pp. 265. Price: 30s. net.

Medical Appointments.

Dr. F. Juttner (B.M.A.) has been appointed Medical Officer for Destitute Persons, including Aborigines of the District Council of Tanunda, South Australia.

* * * *

Dr. Ralph Whisaw (B.M.A.) has been appointed Acting Medical Inspector of Seamen at the Port of Hobart.

* * * *

Dr. A. C. McArthur (B.M.A.) has been appointed Quarantine Officer at Grafton, New South Wales.

* * * *

Dr. F. R. D. Glisson has been appointed Officer of Health of the Local Board of Health, Wudinna, South Australia.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenencies* sought, etc., see "Advertiser," page xvi

RENWICK HOSPITAL FOR INFANTS, SUMMER HILL, SYDNEY: (1) Honorary Physician; (2) Honorary Physician to the Out-Patients' Department.

KYNUNA HOSPITAL, QUEENSLAND: Lady Doctor.

STATE PUBLIC SERVICE, WESTERN AUSTRALIA: Assistant Medical Officer, Hospital for Insane.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney.	Australian Natives' Association. Ashfield and District Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester United Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phœnix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane United Friendly Society Institute. Stannary Hills Hospital.
SOUTH AUSTRALIAN: Honorary Secretary, 12, North Terrace, Adelaide.	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

Diary for the Month.

SEP. 8.—Tasmanian Branch, B.M.A.: Branch.
SEP. 8.—New South Wales Branch, B.M.A.: Ethics Committee.
SEP. 9.—New South Wales Branch, B.M.A.: Nomination of Candidates for Federal Committee.
SEP. 10.—Victorian Branch, B.M.A.: Council.
SEP. 10.—South Australian Branch, B.M.A.: Council.
SEP. 10.—New South Wales Branch, B.M.A.: Clinical Meeting.
SEP. 11.—Western Australian Branch, B.M.A.: Council.
SEP. 11.—Queensland Branch, B.M.A.: Council.
SEP. 11.—Central Southern Medical Association, New South Wales.
SEP. 15.—Tasmanian Branch, B.M.A.: Council.
SEP. 15.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
SEP. 16.—Western Australian Branch, B.M.A.: Branch.
SEP. 16.—South Sydney Medical Association, New South Wales.
SEP. 22.—New South Wales Branch, B.M.A.: Medical Politics Committee: Organization and Science Committee.
SEP. 23.—Victorian Branch, B.M.A.: Council.
SEP. 23.—Western Medical Association, New South Wales.
SEP. 24.—New South Wales Branch, B.M.A.: Branch: Election of Two Members of Federal Committee.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, The Printing House, Seamer Street, Glebe, Sydney. (Telephones: MW 2651-2.)

SUBSCRIPTION RATES.—Medical students and others not receiving THE MEDICAL JOURNAL OF AUSTRALIA in virtue of membership of the Branches of the British Medical Association in the Commonwealth can become subscribers to the journal by applying to the Manager or through the usual agents and booksellers. Subscriptions can commence at the beginning of any quarter and are renewable on December 31. The rates are £2 for Australia and £2 5s. abroad *per annum* payable in advance.